ABSTRACT OF AN

Address

ON THE

ISOLATION OF FEVER PATIENTS.

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IT is admitted that some infective diseases, such as small-pox, scarlet fever, and typhus fever, are propagated through the medium of infected air. The *materies morbi* of these maladies consist of solid bodies, which are capable of being blown about in the atmosphere; and if persons reside close to the place where a small-pox or typhus fever patient is located the air itself may waft the poison of the disease directly from the sick to the sound. The combined efforts of medical and non-medical men in the departments of preventive medicine and public hygiene have largely reduced the death-rate on both sides of the Channel, and, as might be expected, these efforts have produced a greater effect as regards zymotic diseases than in the case of other maladies. In the period 1876-80 the zymotic death-rate in the large English and Welsh towns was 3·8 per 1000 persons living, whilst the death-rate from all other causes was 21 per 1000. In the following decade the zymotic death-rate declined to 3·1 per 1000, being 18·4 per cent. less than in the previous five years, whilst the death-rate from all other causes fell to 19·85, or 5·5 per cent. less than in the previous five years. In the four years ended in 1894 the zymotic death-rate was 2·66, and the death-rate from all other causes 18·31, showing a decline of 14·2 per cent. of the former and 7·7 per cent. of the latter as compared with the previous ten years. In Dublin the greater decrease in the zymotic death-rate as compared with the decrease in the general mortality is still more striking. In the ten years ended in 1890 the zymotic death-rate was 44·05 per cent. less than in the previous ten years, whilst the decrease in the number of deaths from all causes was only 15·59 per cent. In the five years ended in 1880 the zymotic death-rate was 5·1 per 1000 persons living, whilst the death-rate from all other causes was 27·5. In the four years ended in 1894 the zymotic death-rate was 2·55, or 50 per cent. less than in the five years 1876-80, whilst the death-rate from all other causes was 23·37, or 15 per cent. less.

The English medical officers of health have rendered great service to the public by their persistent efforts to secure properly isolated hospitals exclusively for infectious cases. In 1891 Dr. Thorne Thorne, now medical officer of the English Local Government Board, called attention to the remarkable increase in the provision by sanitary authorities of hospitals for fever patients. From 1879 to 1891 £450,000 had been expended in the erection of these hospitals, and it was estimated that there were at least 400 of them in existence. The corporation of Belfast have just resolved to provide a hospital of the kind outside their city at an expense of £70,000. Dublin has a reputation as a great seat of medical education, and its physicians have done much to enlarge the boundaries of the domain of medicine; but I do not think that we can boast of any superiority in our hospital system. It must be admitted that the number of hospitals in relation to population is far greater than in probably any city in the world, but the great defect is the treatment of the highly contagious fevers in the general hospitals, for in addition to two special fever hospitals there are fever departments in six general hospitals and one private hospital. I cannot understand how anyone claiming to be a sanitarian can approve of the treatment of the highly contagious fevers at nine different points in a comparatively small city such as Dublin, and I trust that the day will come when our general hospitals will, like those on the other side of the Channel, refuse to admit cases of small-pox, scarlet fever, typhus fever, and perhaps measles. Cork-street Hospital is the best place we have in Dublin for fever cases, as it receives no other kind and has still some open space surrounding it. We have in the Hardwicke Hospital a second fever hospital. It is quite unsuited for the reception of small-pox cases, and even as a hospital for scarlet fever and typhus fever it cannot for a moment be compared with the vast majority of similar hospitals in England and Scotland. I am aware that many physicians believe that there is sufficient reason for having fever wards in general hospitals, but I challenge them to cite a single writer on hospital management, or on public hygiene, in support of their belief. To a certain extent the authorities of the Dublin general hospitals acknowledge the desirability of isolating fever patients, as some of them have removed their fever wards to detached buildings, which are, however, too close to the main buildings. They are under the control of the general hospital administration; the same physicians and students who attend the wards in which non-infectious cases are treated visit the fever wards, and it is not to be expected that the nurses in the detached building keep apart from those who attend in the main building. In the ideal hospital for infectious maladies the physician's clothes are changed before he leaves it; so, also, are those of the pupils, officers, nurses, and attendants. They wash the portions of their bodies exposed to the infected air. The visitor is covered with an ample cloak and is told not to enter a public conveyance immediately after leaving the hospital. The goods for the hospital are received at the porter's lodge. The hospital is surrounded by spacious grounds and is not nearer than 150ft. from the public road. The dejecta of the patients are destroyed by fire or sterilised by high-pressure steam. Is the fever department of a Dublin hospital placed under these conditions? The recent epidemic of small-pox showed up our weakness as regards isolation hospitals. Cork-street and the Hardwicke Hospitals proved insufficient to accommodate the patients, and it was found necessary to remove the less acute cases to huts situated within the precincts of the workhouse. On Jan. 7th, 1895, there were 122 small-pox cases in the Hardwicke Hospital, 153 in Cork-street Hospital, and 61 in the workhouse sheds—total 324. Cork-street Hospital and the Hardwicke Hospital are quite close to public thoroughfares. What is the opinion of eminent authorities as regards the situation of a small-pox hospital? Dr. Priestley, medical officer of health of Leicester, demonstrated in 1893 that the Leicester Small-pox Hospital, though 620 ft. distant from the nearest house, spread the disease, and he recommended that the hospital should be removed "as far away as possible from the town and its inhabitants." Dr. C. E. Matthews, superintendent of the small-pox hospital at Gore Farm, Dartford, considers that 1000 ft. are the limits of the aerial convection of small-pox, but this estimate has been questioned. Mr. Stafford, medical inspector of the Irish Local Government Board, has published in the last annual report of the Board very striking English statistics, showing that small-pox hospitals spread the disease unless they are thoroughly isolated and well managed. Mr. Wynter Blyth, in his work on "Public Health," quotes with approval the summary made by Dr. Thorne Thorne of the opinions of eminent physicians and epidemiologists, such as Dr. Bristowe, as to the means of preventing contagion. He says: "The first principle to be laid down is the absolute necessity of buildings set apart for small-pox, scarlet and other infectious fevers. A sanitary authority not providing facilities for isolation has failed to fulfil one of the great purposes for which it was instituted. The second principle is that the construction of such hospitals is best carried out with deliberation in non-epidemic times, experience having demonstrated that those which have been hastily run up to meet sudden emergency have provided accommodation of a most indifferent kind, have failed to meet the permanent want of a district, and the cost has been, in relation to usefulness, large. The third principle is that small-pox hospitals should be at least a mile from inhabited dwellings." Dr. John W. Mason, medical officer of health of Hull and physician to the local fever hospital, one of the ablest sanitarians in England, says that the number of patients in a fever hospital should not exceed twenty per acre. What general hospital in Dublin gives an acre to twenty of its fever patients? He states that each zymotic disease should be treated in a building aerially distinct from every other.

It has been said that the establishment of special hospitals for fever would greatly interfere with medical education in Dublin, and it seems to be taken for granted that the scheme

for establishing isolation hospitals contemplates putting them many miles outside the city. No such intention was in the minds of the promoters of the scheme. The hospitals were to be outside the city, but close to it, and with ample space surrounding them. To my mind the present hospital system in Dublin is unfavourable to the study of fever. The cases are treated in nine hospitals, and, with the exception of the special hospitals, there cannot be very many cases in any one of the hospitals. The proper thing would be for the pupil, in his fifth year, to devote himself to the study of fever in a large special hospital such as Cork-street Hospital, containing, perhaps, ten times the number of patients treated in the general hospital he attends. It seems to me highly desirable that, whilst occupied in the study of the contagious fevers, the pupil should keep apart from a general hospital.

THE FATE OF MICRO-ORGANISMS IN INSPIRED AIR.[1]

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IN a communication we recently had the honour of reading before the Royal Medical and Chirurgical Society[2] on "Micro-organisms in the Healthy Nose" we calculated that 1500 organisms are inhaled into the nose every hour. This was the lowest estimate, and we quoted experiments to show that it must be a common event—at least, in our average London atmosphere—for 14,000 organisms to pass into the nasal cavities during one hour's tranquil respiration. The fate of the thousands of microbes which thus enter the human body is a question of great pathological interest, and this increases when it is remembered that the expired air is practically quite free from germs. A study of the subject should therefore be instructive in showing how the human economy deals with the hosts of organisms which are continually invading it through the air we are always breathing. The fact that inspired organisms do not, as a rule, reach the air cells was first pointed out by Lister. He observed that "in simple fracture of the ribs, if the lung be punctured by a fragment driven inwards upon it, the blood effused into the pleural cavity from the wound in the highly vascular organ, though freely mixed with air which enters the pleura through the same orifice, undergoes no decomposition, as is clearly implied by the absence of any symptoms of pleurisy in such cases. The air is sometimes pumped into the pleural cavity in such abundance that, making its way through the wound in the pleura costalis, it inflates the cellular tissue of the whole body; yet this occasions no alarm to the surgeon, unless the openings in the parietal pleura become insufficient to permit free egress for the air, which then becomes pent up in the serous cavity and, distending it far beyond its natural dimensions, encroaches so seriously on the other lung as to embarrass or even abolish its functions." In a post-mortem examination on such a case ten days after the receipt of the injury Lister found the enormously distended pleura free from effusion and perfectly smooth and healthy. This observation was explained by the atmosphere being filtered of germs by the air passages, "one of whose functions it is to arrest inhaled particles of dust and prevent them from entering the air cells."[3] Later Tyndall showed by his experiments with a ray of light in a dark chamber that expired air—or, more exactly, the last portion of an expiration—is optically pure—i.e., that respiration has freed it from the particles of suspended matter with which it is laden.[4] In 1882 Gunning of Amsterdam showed that expired air contains no microbes capable of provoking putrefaction in sterile liquids through which it has been passed,[5] and in 1887 Strauss and Dubreuil independently arrived at a similar conclusion.[6] They spent thirty minutes in expiring from 200 to 300 litres of air into tubes, in the bottom of which was a layer of sterilised alkaline bouillon. The greater number of these tubes remained sterile; a few showed growths of microbes and moulds, doubtless due to accidents of manipulation. Grancher has made many experiments with the expired air of phthisical patients and has never found in it the tubercle bacillus or its spores. Charrin, Karth, Cadéac, and Mallet have made analogous experiments with negative results. In a further series of confirmatory experiments on this subject Strauss[7] showed that on an average of 809 bacteria and spores inhaled only one single germ is expired. Now, as the air is practically freed from all germs by the respiratory act, we have to consider where and how the thousands of organisms are arrested in the air passages. The experiments of Hildebrandt[8] would tend to prove that the air is entirely freed from all germs before reaching the trachea. In controlling this we have examined the mucus from the trachea of all animals recently killed in the laboratory, neglecting, of course, any that had suffered from affections of the respiratory tract. The opportunities are too few to be recorded numerically, but up to the present we have always found this mucus to be quite sterile. The above shows that the fate of micro-organisms must be sought for principally in the upper air-passages. We therefore commenced with the nasal fossæ, and our experiments are published in the paper already referred to.[9] The result we arrived at was that "the mucous membrane of the healthy nose only exceptionally shows any micro-organisms whatsoever. The interior of the great majority of normal nasal cavities is perfectly aseptic. On the other hand, the vestibules of the nares, the vibrissæ lining them, and all crusts formed there are generally swarming with bacteria." These two facts seem to demonstrate that the vibrissæ act as a filter and that a large number of microbes meet their fate in the moist meshes of the hair which fringes the vestibule. Not only does this arrangement arrest the ingress of germs, but others which have penetrated into the nose are rapidly ejected by the action of the ciliated epithelium.

To obtain an idea of how rapid a movement might be imparted by ciliary action we performed the following experiment. A frog was pithed and the lower jaw cut away, exposing the dorsal wall of the pharynx, which in this animal is covered with ciliated epithelium. On this a particle of wet cork was placed, and it was most striking to observe the rapidity with which it was conveyed along to the œsophagus. We found that it travelled at the rate of 25 mm. (one inch) per minute. In the normal frog the rate is probably more rapid, as ciliated epithelium thus exposed is soon damaged. It is difficult to give an analogous demonstration in the human subject, as a foreign body of any tangible size, even powdered magnesia, is apt to act as an irritant and produce a free secretion of watery mucus, which rapidly washes it down into the vibrissæ. With regard to the micro-organisms which may be deposited in the Schneiderian membrane, we carried out the following series of experiments on four different occasions. Cultivations were made from the vibrissæ and from the mucous lining of the nose of one of us who acted as the subject. The cultures from the vibrissæ invariably showed yellow and white colonies in abundance, while those from the mucous membrane were almost invariably quite sterile. This served to show that there was no red growth of the Bacillus prodigiosus, the organism we decided to experiment with. A pure culture of this organism had been prepared, and a sterilised loopful was deposited on a distinct point on the septum, well within the vestibule. Cultivations made from the spot immediately, or within five minutes, showed an abundant confluent growth. When taken after fifteen minutes' interval the cultures on agar showed already a diminished growth. After thirty minutes the growth had markedly decreased; at the end of one hour it had diminished by 75 per cent. and consisted of a considerable number of discrete colonies; frequently no trace of the loopful of the bacillus prodigiosus could be

[1] A paper read in the Section of Pathology at the annual meeting of the British Medical Association held in London in August, 1895.
[2] See Transactions, vol. lxxviii., 1895.
[3] Brit. Med. Jour., July 18th, 1868.
[4] Philosophical Transactions of the Royal Society, vol. clxvi., Part 1, 1876, p. 27.
[5] "Werden mit der Expirationsluft Bacterien aus dem Körper entführt?"—Klinische Monatsblätter für Augenheilkunde, 1882.
[6] Sur l'Absence de Microbes dans l'Air expiré: Académie des Sciences, Séance du 5 Décembre, and La Semaine Médicale, 1887, No. 49, p. 493.
[7] Annales de l'Institut Pasteur, 1888, No. 4.
[8] Experimentelle Untersuchungen über das Eindringen pathogener Mikroorganismen von den Luftwegen und der Lunge aus.—Beiträge zur pathologischen Anatomie und Physiologie, Ziegler und Nauwerck, Band ii., 1888, p. 421.
[9] Micro-organisms in the Healthy Nose, &c.

detected after eighty minutes from the time it had been deposited, and after two hours had elapsed in no case did we get any growth whatever when cultivations were made from the spot inoculated. We would note that this observation had reference to a loopful of pure culture, large enough to be detected as a distinct red point on the mucous membrane, and therefore containing myriads of organisms. What became of them all we are at present not prepared to say. During the two to three hours that the nose was kept under observation cultivations were continually being made from around the spot, but never once did they show any B. prodigiosus. We carefully examined the opposite wall of the nasal cavity and only once found a red growth amongst the vibrissæ. Wurtz and Lermoyez[10] hold that the nasal mucus itself exerts a bactericidal influence on all, or nearly all, pathogenic agents. So far we have been unable to corroborate their researches; but this may be due to our want of success in obtaining an appreciable quantity of sterile mucus. To collect this secretion it is necessary to introduce a sterilised cotton-wool plug into the nasal cavity and leave it there for some time. We have found it practically impossible to do this without contaminating the tampon with the vibrissæ at the orifice. Now, as we have shown, these are never free from germs, and the nasal mucus with which they come in contact was in no case sufficiently germicidal to prevent their free growth when sown on gelatin plates. In some cases we left the nasal mucus in a sterilised glass for from one to sixteen hours at room temperature, during which period it had abundant time to exert its destructive action on the germs which had adhered to it when passing out along the vibrissæ. Nevertheless, there was always a free growth of yellow and white colonies when gelatin plate cultivations were made from it. Wurtz and Lermoyez have only published their researches on the action of nasal mucus upon the anthrax bacillus; but still they hold that the same germicidal effect is exerted in different degrees of intensity on other microbes.

Although we have been unable to obtain any proof of bactericidal qualities in nasal mucus, we have satisfied ourselves that it is possessed of the important property of exerting an inhibitory action on the growth of micro-organisms. This is shown by what we have said above and by the following experiment. A loopful of a fluid culture of the B. prodigiosus was mixed with a small quantity of nasal mucus. From this gelatin plate cultivations were prepared, some immediately and others at various intervals up to thirty-six hours; on each occasion the same quantity of the mixture was used for inoculating the plates. The number of colonies of the B. prodigiosus which developed in various plates was practically identical, showing that no increase in the number of organisms had taken place, and also that no germicidal action had been exerted during even many hours' exposure to the mucus.

We have made a great number and variety of experiments in order to test the bacterial condition of the air before and after passing through the nose. For a long time the conflicting and contradictory results showed us that there was some error in our methods. These were based on the plan adopted by Bloch for testing the warming and moistening influence of the nose. Finally, and only lately, we succeeded in approximating closely to the normal condition of affairs by designing the following method. A sterilised glass cannula, shaped like the tube of a post-nasal syringe, was introduced into the post-nasal space of one of us. The end of this glass tubing, projecting through the mouth, was directly connected with a glass tube passing down through a rubber cork to the bottom of a large-sized test tube. Fifteen c.c. of liquefied sterile nutrient gelatin had been poured into this tube, the bottom of which was narrowed so that quite an inch of the glass tubing passed below the surface of the liquid. Another piece of glass tubing passed up through the rubber cork and was connected with a mouthpiece, through which inspirations were made regularly by the other observer so as to imitate normal breathing. In this way the air passed freely along both nasal cavities of one observer, entered the glass tubing, and bubbled through the layer of gelatin. Ten respirations were thus taken and an Esmarch roll cultivation was made. In an analogous amount of laboratory air we found twenty-nine moulds and nine bacterial colonies; whereas after passing through the nose the air contained only two moulds and no bacteria. On another occasion we found in nine litres of laboratory air six moulds and four bacterial colonies, while the same quantity of air after passing through the nose exhibited one mould and no bacteria. We see, therefore, that practically all, or nearly all, the micro-organisms of the air are arrested before reaching the naso-pharynx; probably a majority are stopped by the vibrissæ at the very entrance of the nose and those which do penetrate as far as the mucous membrane are rapidly eliminated. The nasal mucus is an unsuitable soil for the growth of organisms, and hence is an important factor in that it does not further their multiplication. The removal of the intruding organisms from the Schneiderian membrane is probably in the main due to the action of the ciliated epithelium, assisted by the trickling of mucus and the lachrymal secretion. Phagocytosis may share in the work of removal, though to a small extent, for we have only once found phagocytic cells containing bacteria.

[10] Le Pouvoir Bactéricide du Mucus Nasal: Annales des Maladies de l'Oreille &c., 1893.

GLEANINGS FROM SURGICAL PRACTICE.

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IV.[1]—THE TREATMENT OF ABDOMINAL INJURIES WITHOUT EXTERNAL WOUNDS.

IT must be confessed that the treatment of intra-abdominal injuries without external wounds at the present period is not quite satisfactory, since it is as uncertain in its methods as is the diagnosis of the nature of the injury itself. With a clear diagnosis of the nature of any case, whether abdominal or otherwise, a surgeon has no real difficulty in laying down the lines upon which his treatment should be based. With an uncertain diagnosis all active treatment is withheld as being dangerous or unnecessary, and consequently time, which is always valuable, is liable to be lost. In intra-abdominal injuries the surgeon, therefore, too often stands beside his patient with an undecided mind. He may suspect, more or less shrewdly, in any individual case that a visceral injury has been sustained; he may be alive to the fact that if this suspicion be true it is by surgical interference, and by it alone, that life is to be saved; he may also be equally sure that if success is to be secured his surgical measures must be promptly applied; and yet he hesitates, and he does so because he knows that, however severe may be the primary symptoms, there is a possibility of no such visceral injury having been brought about, or that if present it is of such a serious nature as to be beyond human skill. If the force which has produced the injury has been of such a character as to have probably produced some crush of a solid viscus, or rupture of a hollow one, the desire to give relief by surgical means is naturally stimulated, and that desire to act is only restrained by the knowledge that, however probable the character of the injury may be, its exact nature is not to be diagnosed with certainty by any symptoms which may have immediately followed the accident by which it was caused, whether the symptoms happened to be of a severe or of a trivial character. And if the force which has produced the injury appears to have been somewhat insignificant, and consequently not likely to have caused any serious intra-abdominal mischief, such mischief is nevertheless neither improbable nor impossible when grave general symptoms immediately followed its receipt. Indeed, it is always to be recognised that the presence of severe general symptoms, such as collapse and vomiting, as immediate consequences of an abdominal injury, are consistent both with the presence and absence of grave mischief; and also that the mildness or absence of these general symptoms is quite compatible with serious and fatal complications; all treatment of abdominal injuries must of necessity be therefore careful, watchful, and expectant.

The patient is always to be gently placed in bed and all roughness in removing his clothes and moving his body carefully guarded against. His legs should be raised to a slightly flexed position by means of a pillow put beneath the knees, and his shoulders should also be elevated above the level of

[1] Nos. I., II., and III. were published in THE LANCET of Nov. 2nd and 9th, and Dec. 7th, 1895, respectively.

the buttocks, the abdominal muscles in this position being relaxed. All external indications of injury should likewise be noticed. The body should be made warm by blankets, and hot bottles applied to the feet; but unless the collapse threatens to be fatal it should be disregarded, for if a solid or other viscus has been crushed the collapse has a beneficial influence in helping the coagulation of the blood in the ruptured vessels and so preventing hæmorrhage and thus warding off death. When death is threatened by the collapse a stimulant should be used, but not by the mouth. A subcutaneous injection of a drachm of ether or brandy is the most expeditious method of its administration, or, when this is inapplicable, a tablespoonful of brandy thrown into the rectum diluted with the same quantity of warm milk, beef-tea or water is nearly as good. When vomiting takes place the nature of the material brought up should always be carefully inspected; if mixed with blood, which has not been swallowed, a symptom of significance has been given to the surgeon, which he must keep in mind. The condition of the bladder should, under all circumstances, have a watchful care, and for diagnostic purposes a soft rubber catheter should be passed at an early period of the case; and if urine be drawn off, and it is natural in character, there is good reason to hope that neither the bladder nor the kidneys have been injured; although a second or third observation of the urine is necessary before a positive opinion as to the absence of injury to the kidney can be rightly formed, since the urine first drawn off may have been what had been secreted before the receipt of the accident, and blood from the injured kidney may not have had time or space to travel down the ureter.

With respect to pain, too much attention must not be paid to it in the early hours of the case, for it can only be assuaged by opium in one of its forms, and this drug tends seriously to mask symptoms. Under these circumstances the good it may do is neutralised by the harm associated with it by interfering with the formation of a diagnosis upon which possibly the life of the patient may hang. When, however, pain is severe and of a killing tendency—for pain does kill—a small subcutaneous injection of morphia may be used, or a morphia suppository or some laudanum may be introduced into the rectum with a nutrient enema; for it should always be understood that in no case of abdominal injury should food or fluid be introduced into the stomach during the period of watching for symptoms with diagnostic intentions. Where it is evident that nourishment is called for, such should be given by the rectum in the form of four- or five-ounce enemata of warm beef-tea or milk and egg, into which a stimulant or sedative can be poured as occasion may require. To give ice to the patient to suck is an injurious practice, although the patient's mouth may frequently be sponged out with soda-water or water, and the lips kept moist. In the way just described the first few hours after the receipt of the injury should be seriously spent, the object of the surgeon being to watch and note symptoms as indications for either active or passive treatment. Should collapse fail to pass away or be intensified, it is more than probable that serious hæmorrhage has taken place from the crushing of one of the more solid viscera, such as the liver or spleen, which must soon end in death. Should vomiting and pain be intensified, the collapse will probably diminish, and the suspicion may be rightly raised that some portion of the intestinal canal has been injured, if not ruptured, and if blood be mixed with the vomit this suspicion should be strengthened; under these circumstances the thought of operative interference should at once come to the front.

Should the general symptoms which have been named gradually diminish in intensity, and no fresh ones appear, the hope that no serious mishap has taken place in any of the intra-abdominal organs may reasonably be entertained and the treatment of the case be laid down upon such a basis. It must, however, still be directed on most cautious principles. Rest in the horizontal position should be carefully maintained and all movements restrained. Rectal alimentation should be kept up for several days and the stomach be left alone; nothing, indeed, should be introduced into it until the surgeon is fairly satisfied that it has not been injured, and that the bowel below will not be hurt by peristaltic movements. The first food introduced may be a thin animal broth, but not milk, since the former can be completely absorbed, and the latter, so far as the intestine is concerned, should be regarded as a solid diet. Spoonfuls of water may at this time also be given during the hours of testing and watching. If the bowels have not acted, and indications are present, suggesting that an action is wanted, a glycerine enema, or one of half a pint or so of oil and gruel, may be a help. Aperient medicine must not be given, for the muscular action of straining to help a stool is very apt to be detrimental. In several of the cases I have recorded it was, indeed, fatal. In the cases which tend towards recovery one-grain doses of opium may be given to an adult every six or eight hours, for this drug not only relieves pain, but assists, by checking peristalsis, in maintaining rest to the injured peritoneum and viscera, and helps materially to arrest inflammatory action. Indeed, in all cases of abdominal injury in which peritonitis appears and operative measures seem to be inapplicable or have been rejected, opium should be given, for, although in one sense it does harm by checking repair, in another sense, by helping to maintain rest of the constantly moving and possibly injured intestines, it assists all reparative processes and at the same time relieves pain. Opium, however, in any of its forms should be given with caution and the smallest dose of the drug administered that will fulfil the objects sought.

In three out of every four cases of abdominal injury which occur in practice the treatment I have laid down is applicable; but in no case, however trivial it may appear, can it be said with any safety that convalescence is established under fourteen or twenty-one days; in most cases an extra week of cautious treatment should be enforced. When symptoms of peritonitis appear soon after the injury or at a later period extra precautions should be insisted on. The four following cases of recovery after abdominal injury will help to illustrate the principles of treatment which I have described and are in themselves interesting. In the first two cases I believe the stomach had been injured—possibly its mucous coat had been torn and separated; in the third case I believe the jejunum had been bruised, but not torn, or there would probably have been some blood mixed with the vomit; and in the fourth case the colon was the probable seat of injury.

CASE 35.—*Injury to the stomach; recovery.*—A girl aged fifteen years, having been knocked down by a two-horse van and injured by the two side-wheels of the van passing over her abdomen, was admitted into Guy's Hospital in May, 1887, in a collapsed and almost pulseless condition. Her respiration was chiefly thoracic, and the left rectus abdominis muscle was rigid. As the collapse passed off she vomited and brought up blood mixed with the vomit. For sixteen hours the vomiting was persistent, and the vomit always contained blood; it then ceased, and in two months the girl left the hospital convalescent. She was kept in bed, and fed for about two weeks by nutrient enemata and suppositories, and subsequently by milk in small quantities and beef-tea: solids were not given for some weeks.

CASE 36. *Injury to the stomach; recovery.*—A boy aged nine years was brought in 1884 to Guy's Hospital after having been run over by the wheel of an empty butcher's van before he had breakfasted. He tried to stand after the accident, but fell, and was carried to the hospital. On his way he vomited much blood, as proved by the condition of his clothes. There were no indications of external mischief. His urine passed naturally and was healthy. As the collapse passed off he several times vomited dark coffee-ground fluid which clearly contained blood. He was fed by nutrient enemata and suppositories, and given a little opium to relieve pain, under which treatment he steadily convalesced.

CASE 37. *Injury to the abdomen from a diffused force; probably bruising of the small intestine high up; recovery.*—A girl aged five years, after the hind wheel of an empty van had passed over her back and the lower part of her thorax, was admitted into Guy's Hospital under my care in 1886. She was much collapsed on admission, and there was external evidence of injury on her loins. She was said to have vomited directly after the accident, but not blood, and for five days after her admission the vomiting continued, but only some time after food, this fact being suggestive that it was the upper part of the jejunum which had been injured, probably by bruising. A good recovery took place.

CASE 38. *Contusion of the abdomen; probably injury of the colon; hæmorrhage from the bowel for fifteen days; recovery.*—A man aged thirty-nine years was admitted into Guy's Hospital under my care on March 12th, 1878. Five days previously, when climbing over a fence in the dark, he had fallen down an embankment twenty-five feet high into an earth cutting. He was stunned for a time by

the fall, and when he recovered his senses he felt a pain in his abdomen as well as in his right wrist and shoulder. He got up and walked home, a distance of nearly a mile, and went to bed, taking a purge before doing so. Twelve hours later he had a motion, when he passed a quantity of dark, not red, blood. He went on with his aperient medicine for five days, every day passing blood, but in diminishing quantities. He also had abdominal pain. On his admission a soft swelling was found to be present over the sacrum, which extended upwards towards the last right rib and outwards over the great trochanter; there were also others over the tibia and wrist. These were all clearly blood swellings. The abdomen was swollen and very tender. There were no indications of hæmorrhoids. When his bowels acted blood was still found to be mixed with his fæces. He was much blanched and feeble from loss of blood. He was put upon milk diet and kept in bed, and in about fifteen days after his admission all blood had disappeared from his motions. The abdominal pain ceased, and he was soon able to leave the hospital.

At Guy's Hospital, during eight consecutive years terminating twelve years ago, 71 cases of abdominal injuries were admitted. In 45 cases, or in about two-thirds of the whole number, beyond a passing collapse of variable degrees of severity and some tenderness over the injured part, no indications of any internal mischief showed themselves. In 10 cases, or in one-seventh of the whole number of cases, symptoms of peritonitis followed the accident, as evidenced by extensive tenderness over the injured part, which was increased by movement; thoracic respiration, resulting from the indisposition of the abdominal muscles to act and the pain caused during that action by pressure on the inflamed peritoneum; nausea; and in some cases vomiting. In these cases it is fair to presume that some internal injury had been sustained which was reparable. In 17 cases, or in about one-fourth of the whole number of cases, rupture of a viscus took place, which was followed by death. This record is not, however, satisfactory to the modern surgeon, who, with his improved methods and precautions, believes—and, I maintain, believes rightly—that better results are to be achieved. He asks himself therefore (1) in which instances surgical interference is likely to prove beneficial; (2) under what circumstances is he justified in interfering; and (3) what are the best means to enable him to carry out his views.

1. To answer the first question: In which case is surgical interference likely to prove beneficial? the surgeon must go to the post-mortem records of a hospital for the material to yield him an answer; and when he finds these cases, such as I have found and recorded in these papers, in which a rupture of one loop, or of more loops, of intestine was the result of injury and the cause of death, he rightly thinks that if this form of injury had been recognised during life and dealt with boldly and at once on its receipt a fair proportion of these fatal cases would have been added to the list of successful cases which modern surgeons by recent methods have already been able to record. He, moreover, does not despair of achieving some success where he finds rupture of such a solid viscus as the liver, spleen, or kidneys—for modern experience justifies the hope. Death also from ruptured veins, whether mesenteric or otherwise, he knows is not beyond his reach.

2. The second question consequently at once requires an answer: Under what circumstances is the surgeon justified in making an exploratory incision into the abdominal cavity for diagnostic and remedial purposes? And to the consideration of this difficult question I now pass. I have already dwelt upon the general symptoms of intra-abdominal injuries, and pointed out how, after the application of a feeble force, such as is not likely to have produced mischief, severe general symptoms may follow; and also how, after the application of a potent force, the general symptoms following the injury may be so slight as to induce the surgeon to believe that no serious intra-abdominal injury can have taken place. To support these truths I have also recorded examples in which patients have walked into hospital after the receipt of a fatal injury, and would have walked out again had they been allowed, when beneath their abdominal parietes a fatal rupture of a solid or hollow viscus had been sustained. I have likewise pointed out, and supported the view by the experience of Guy's Hospital, that two-thirds of all cases of abominal injury tend towards recovery, and that in those the primary symptoms which may have immediately followed the accident, however grave or trivial they may have been, sooner or later passed away, and the cases went on to convalescence, unless the injury to a viscus or to the peritoneum had been of such a nature as to excite some local or general symptoms of peritonitis within a day or so of its occurrence. When, however, in any individual case any one of the general symptoms, and particularly that of collapse, persists or becomes more marked, or when for a time the symptoms seem to have ameliorated and in a few hours again become grave, the conclusion that serious intra-abdominal injury has been sustained is not only reasonable but right, and more particularly when the force which is supposed to have brought about the injury was of such a nature as to have been likely to have caused the mischief. Under these circumstances it is also probable that a solid viscus has been lacerated. If, also, under like circumstances, vomiting persists, or, having left, returns and is obstinate, serious trouble is suggested; if, also, blood appears in the renewed vomit and was absent in the primary, and its presence continues, rupture of the small intestine seems probable, and the rupture is probably jejunal.

Rupture of the liver or spleen, as a general rule, kills by hæmorrhage, and when the laceration is severe and the hæmorrhage is copious the patient rarely recovers from the collapse which immediately follows the accident, or if he rallies for a few minutes or but a little it is only to relapse into a deeper collapse which ends in death. Under these circumstances the surgeon has no opportunity to test his powers, and no justification for interference. When the rupture is limited in extent, and the shock of the accident or the force which produced the rupture is of a crushing nature, hæmorrhage being consequently limited at the time, death from collapse need not take place, and if the treatment is judicious and movements are prevented repair may proceed even to a cure; but under other circumstances local peritonitis may be set up which may terminate favourably in rare cases, although in the majority of cases in another way. In such instances, with the first appearances of symptoms which suggest peritonitis—such as distension of the abdomen and local pain, with a return of vomiting or its aggravation—a surgeon would be quite justified in making an abdominal exploration, and I hold it should be done, for by such means a moderate mass of crushed liver may be removed and future hæmorrhage prevented by some antiseptic plug. An injured spleen may be dealt with either by removal or by the same means as have been described as being applicable to an injured liver; the abdominal cavity may be cleansed from blood, and the patient thereby placed in a position in which repair is possible—that is, if from age, disease, or loss of blood the patient is not rendered incapable of bringing about repair from want of power.

Crushed kidney rarely requires surgical interference, for no organ repairs so well and satisfactorily as the kidney after injury, and it is only in exceptional instances that the surgeon's interference is applicable. But this subject does not come under consideration on the present occasion. The typical case for surgical interference is, however, that of ruptured intestine, and athough its diagnosis is never certain it may be considered highly probable after the receipt of a diffused injury to the abdomen or a severe local injury, particularly if, as an immediate result of the accident, there is but little collapse and where vomiting soon becomes a prominent and persistent symptom, with lasting local pain and great thirst, and with or without abdominal enlargement. On reviewing the notes of the nineteen cases of intestinal rupture which I have recorded, these views are strongly supported, for it is interesting to read that the absence of serious primary collapse was very general; that vomiting of a persistent character was frequent, and vomiting of blood not rare; that local pain of a severe character was also common, and intense thirst a marked symptom, more particularly when the rupture was high up in the canal; and likewise that early abdominal distension was a symptom of importance, and that when present it was an indication for action rather than the reverse.

3. With the presence of these symptoms, therefore, in any case of abdominal injury brought about by forces which are likely to have produced such a rupture, and particularly if they have persisted for eight or ten hours and collapse has not been present, or, if present at first, has passed away, I should hold any practitioner free from blame if he suggested and caused to be carried out what is called a laparotomy—

that is, an exploratory central abdominal incision, with the view of searching for and uniting a ruptured bowel if found to be present, or of arresting bleeding and giving a chance of life to a young subject or strong middle-aged man. But this measure, to prove successful, must be undertaken early—that is, not later than twenty-four hours after the receipt of the injury, and earlier if possible—for it seems that death within thirty-six or forty-eight hours of the accident is the rule, whilst some die earlier and a few later; but it is clear that the earlier the operation is performed the greater may be the chances of success. In old or feeble subjects such a measure is, however, out of court, but in young people and healthy subjects it ought to be undertaken.

CURRENT FROM THE MAIN.

By W. S. HEDLEY, M.D. EDIN.,

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(Concluded from p. 1572 of Vol. II., 1895.)

1. *Continuous currents:* (*a*) *Physical characters.*—Although the current produced by the electro-motive force of the continuous current dynamo is unbroken and always flowing in one direction, it cannot be said to be absolutely uniform in strength. That is to say, the current obtained, for example, from a single dynamo having a commutator of only a few sections is undoubtedly a "pulsatory" current. But such are not the conditions that exist in dealing with continuous currents from modern central lighting stations. In the latter case a number of dynamos, usually running at different speeds and having commutators of numerous sections, are used "in parallel" with accumulators of large capacity. The current emanating from such a source cannot be called "pulsatory." Its line of electro-motive force with the now universal "constant potential" system may be regarded as practically straight.[1]

(*b*) *Chemical effects.*—It is a law of physics that electrolytic action is directly proportional to the quantity (coulombs) of electricity passed, irrespectively of electro-motive force or of any other condition. With a varying current there is an apparent anomaly. In this case instruments depending for their action upon thermal or magnetic forces do not read "true ampères." Are central station continuous currents sufficiently varying to share this anomaly? In other words, does a given reading of the milliampère meter represent the same amount of electricity whether the source of supply be a Leclanché battery or a continuous current electric light circuit? I have carefully tested this point by means of a Gaiffe's coulombmeter with a given current for a given time from these two sources respectively, and find that within the range of experimental accuracy (within 2 per cent.) the results are the same.[2] That is to say, from either source equal intensities, as indicated by the galvanometer, do an equal amount of electrolytic work in an equal time.

(*c*) *Physiological effects.*—With an unvarying current physiological effects appear to depend solely upon current—that is to say, equal intensities give equal effects, irrespectively of the relative amount of electro-motive force and resistance in the circuit. With varying currents these effects are influenced by the maximum current, and also by the rate of change of current value—i.e., by the suddenness with which the change is made. Approaching the vexed question as to whether with the lighting circuit (of, say, 100 volts) passed through a controlling resistance pain is greater than when the current is drawn from a battery of low voltage, the answer will depend upon *how* the resistance is placed. I hold that there is a difference between applying, say, 10 m.a. at 115 volts through a resistance placed *in series* with a patient and applying 10 m.a. with only just sufficient electro-motive force to overcome the resistance of the patient's body; and this will hold good whether the 10 m.a. be obtained from Leclanché batteries or from any other source. The reasons are as follow: (1) that at any break in the circuit the full voltage of supply is obtained, and (2) that upon completing circuit there is a much reduced electro-motive force across that portion of the circuit which was previously broken; therefore it follows that between the moment of completing the circuit and the establishment of steady "value" of electro-motive force there must have been a time rate of change, since no work can be done instantaneously. Now consider step by step what would appear to be the sequence of events in this case. On first closing the circuit there will be at that instant no current; following quickly there is to be expected a current rush, probably in excess of the normal, and this rush of current would probably steady itself (together with the electro-motive force) by oscillations of short period.[3] It is noticeable that with a dynamo current used through a resistance "in series" with the patient greater pain accompanies and a greater skin reddening follows the application than when a continuous current battery is used, and that both effects are decreased by pressing upon the electrode: in other words, by making a better electrical contact. In looking for an explanation of this it is to be remembered that an imperfect contact may have a high electro-motive force across it, and that the heat generated in any circuit or part of a circuit is in proportion to the watts absorbed. This may give rise to considerable local heating.[4] With high potential currents the available electro-motive force is greater, therefore the possible heating effect may be comparatively great. This may help to account for reddening and pain. The importance of a good contact (well warmed, well wetted, and carefully adjusted electrodes) is known to all who use such currents on the living body, especially with imperfect apparatus. And this leads directly to an infinitely important point, one which it is the chief object of this paper to insist upon—viz., that it is only by using an instrument constructed on the principle explained in THE LANCET of May 4th, 1895, that all these risks and difficulties are to be avoided. It is by means of this arrangement that a central station continuous current can easily be obtained of only the electro-motive force necessary for the purpose required. If this be the case (it is mathematically certain and practically demonstrable) it is obvious that many of the points just discussed need never arise in practice.

2. *Alternating currents.*—Those lighting circuits which are of an alternating kind may be described as currents not strictly sinusoidal, but partaking of the sinusoidal character and having alternations at the rate of about 5000 to 6000 a minute. It need not here be repeated that a strictly sinusoidal current takes its name from the fact that it "follows the law of sines as regards its variation in time." It is a current which gradually attains its positive and negative maxima and shows no lost time and no actual interruptions. Its potential rises and falls with perfect regularity. It is represented graphically by a "curve of sines," and may be contrasted with the sudden and "dissymmetrical" changes of potential shown by the pointed and irregular curve of a coil's alternations. The alternating light current differs from the sinusoidal chiefly in the comparative irregularity of its curves, an irregularity depending upon the construction of the dynamo, the "capacity" and "self-induction" of the circuit, and other causes. The faradaic current differs from both the foregoing in the fact that its positive and negative maxima are very suddenly attained and are unequal in extent; the current is therefore a "dissymmetrical" one. From these physical differences arises a dissimilarity in physiological effects. Inasmuch as the excitant action of an electrical current bears a direct ratio to the suddenness of the fall of potential it follows that the sinusoidal current will be better tolerated than the more brusque

[1] There are possible sources of variation of the dynamo current owing (1) to what is known as the "hunting" of the engine, a kind of see-saw movement of its governors; and (2) to the "regulation" necessary to maintain "constant potential" under varying loads.

[2] It is well to remember that when a wire rolled round a drum is used as a resistance the galvanometer may be influenced by its too great proximity owing to mutual induction.

[3] To explain this the analogy of the water-pipe will be found useful. A small water-pipe with a stopcock at its middle connects at each end with a water vessel or tank. Both vessels are partly filled with water, but one at a higher level and at considerably greater pressure than the other. If the stopcock be suddenly opened there may be expected (1) a sudden rush of water in the direction of the vessel of low pressure; (2) a rebound as it cushions against the otherwise stationary water, followed by oscillations within the pipe; and (3) a gradual and steady flow until both vessels are equal in height and pressure. If the modern electrical theory of wave motion in or of ether be accepted it is not difficult to adapt this analogy to the circumstances of the case in question.

[4] According to the C^2R law that the watts absorbed and heat generated in any part of a circuit are equal to the square of the current multiplied by the resistance.

alternations of the coil. Also on this account it is equally evident that the latter for certain purposes can never be altogether supplanted by the currents of smoother curves. On the other hand, where effects on general nutrition rather than on muscular contraction are sought the latter currents present decided advantages. It has been shown by d'Arsonval that in a person subjected to alternating currents of a sinusoidal character, although the current be scarcely felt and excite no muscular contraction, the nutritive exchanges undergo an augmentation of from 40 to 50 per cent., the "respiratory capacity" being almost doubled. These effects are probably owing (1) to the large amount of electrical energy that can in this way be borne by the body, and (2) to an influence on nutrition due to the decompositions and recompositions that must ensue on the passage of an alternating current through the tissues. Now the alternating currents of commerce, partaking as they do of the sinusoidal character, make it possible to pass large amounts of energy through the body, whilst at the same time their comparatively sudden falls of potential determine a certain amount of muscular contraction. They therefore present a means of increasing the nutritive exchanges (1) by a direct action in virtue of their sinusoidal type, and (2) by an indirect action in virtue of the muscular contractions they induce.[5] Applied chiefly through the medium of the water-bath, this alternating lighting current is daily employed in practice. It seems to act as a general tonic and to stimulate the nutritive exchanges. Its employment has been followed by good results in chloro-anæmia, rickets, muscular atrophies of myopathic origin, obesity, gout, sciatica, and rheumatism, the latter in its articular as well as in its muscular manifestations. This current is easily handled for medical purposes, and its use is now by no means uncommon. Certain observers, among whom Gautier and Larat were the first, have carefully recorded and tabulated their experiences.

There now only remain to be dealt with the details of the control apparatus or "reducer of potential." For these I am indebted to the kindness and skill of Mr. Quin, electrician to the Brighton Corporation, to whom I had made known the difficulties and requirements of the case. He was good enough to place at my disposal the following drawings and descriptive particulars of a simple and efficient apparatus adapted to meet the varied demands of direct electrical treatment.[6] It is based upon the principle of the variable shunt already recommended and described by me,[7] but it presents some novel features: (1) The resistance is not altered step by step, but gradually throughout its whole range; (2) the switch and resistance are so interlocked that it is impossible to open or close the main circuit until the potential across the shunt circuit is *nil;* (3) it has a very wide range; and (4) it has an adjustable stop so that any range from zero to the limit may be obtained. It will at once be seen that this apparatus forms a convenient means of obtaining continuous current for the purpose named. In common with batteries it has the advantage that the pressure across the patient's circuit is only that absolutely necessary for the purpose in hand, whilst it is without many of the disadvantages inseparable from batteries—their uncertainty, polarisation, cost, and the ever-recurring trouble of recharging. Its use is not recommended upon transformed systems without the intervention of a good transformer.

Figs. 1 and 2 are the plan and elevation respectively;

FIG. 1.

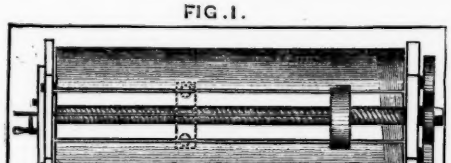


Fig. 3 is the end elevation showing the interlocking arrangement; and Fig. 4 is a diagrammatic sketch of the connexions. It will be seen that the resistance wire (which should be of platinoid or other high resistance metal) is

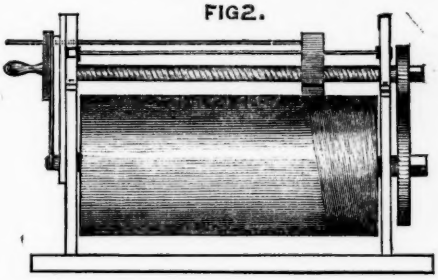
[5] Revue Internationale d'Électrothérapie, p. 289, 1895.

[6] This apparatus will also actuate the coil, but cautery and the charging of accumulators will be separately considered.

[7] THE LANCET, May 4th, 1895.

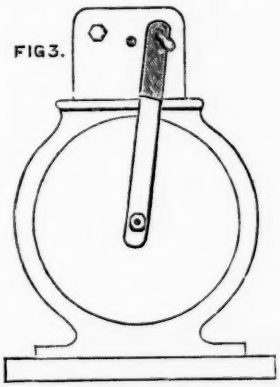
wound upon a drum of rather large diameter, the wire being laid in a groove cut in the drum. Different sections of wire are used on the various portions of the drum, according to the demand for current in the therapeutic circuit. The total resistance of this wire is about 1000 ohms. The drum is mounted on a spindle and is capable of being revolved by means of a crank handle applied to the square end of

FIG 2.



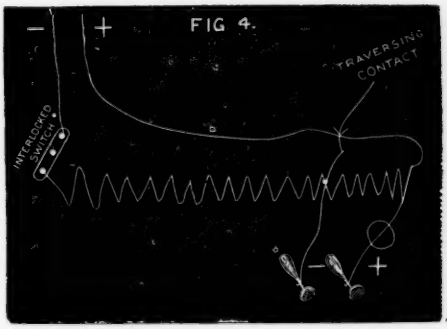
its own spindle or through gear, if the handle is applied to the square end of the top spindle. The drum spindle, if carried right through, should be fitted with an insulated coupling piece, as at each end it forms one terminal of the resistance wire. The top spindle (geared to the drum spindle) is threaded along its length,

FIG 3.



forming an endless screw. It is insulated from the end on which the switch is fixed, and also from the traversing contact which it drives. Two guide-bars for the contact are provided, which are insulated at the geared end and in contact with the top portion only of the switch end. Attached to the sliding contact is a metal bar, which is

FIG 4.



shown projecting through the switch end and the ebonite base of the switch. This bar forms the locking arrangement, and it will be seen that, unless the traversing contact is quite "home" and the bar thereby withdrawn, the switch cannot pass this point, and therefore cannot

be placed either "on" or "off." An ebonite blocking-piece is fixed to the radial arm of the switch to prevent electrical contact between the switch and bar. While this instrument forms a ready means of utilising lighting currents (when not transformed) there still remain to be provided for those occasions when currents of sinusoidal or allied forms are required. These occasions are, as already stated, of fast increasing frequency in modern practice. Currents of this order may readily be obtained by the use of a small motor driving an alternating current-generator. Even if the supply be an alternating one this arrangement might be preferable to simply using the current through a transformer, inasmuch as both the electro-motive force and "frequency" of the useful circuit could thus be accurately controlled. By the insertion of "resistance," "capacity," or "self-induction" in the circuit the shape of the electro-motive force curve also can be regulated.[8]

The ideal system, therefore, from an electro-therapeutic point of view would seem to be a direct continuous current supply with a traversing interlocked shunt rheostat for the purposes of direct application, together with a motor-driven alternator and arrangements for varying speed, field excitation, and the insertion of "capacity," "self-induction," or "resistance" periodically or continuously into the circuit. With these arrangements and with the safety devices previously recommended any form of current can be obtained with a wide range of electro-motive force and periodicity ("frequency"), and at the same time with an absolute absence of risk. The time ought to be approaching when electricity will be prescribed and administered not only in measured units of intensity, density, and time, but with definite ideas of the shape of the electro-motive force curve and of the therapeutic indications that a given curve may be expected to fulfil.

(Since the above was written it has become evident that a change is imminent in the official definition of "low pressure." The committee of experts appointed to advise the Board of Trade on this point recommend that "when the conditions of the supply are such that the pressure may at any time exceed 500 volts if continuous, or 250 volts if alternating . . . . the supply shall be deemed a "high-pressure' supply." The limit of low pressure is thus raised to the figures named. It is further provided that "the pressure of a supply delivered to any consumer shall not exceed 250 volts at any pair of terminals." Thus, on the multiple wire system a 500 volt shock would be obtainable across the outer mains. If the neutral wire be not earthed it becomes in the highest degree probable that the negative pole will get to earth by electrolysis; in such a case a 500 volt shock could be got from the positive pole to earth. If this higher standard of voltage be adopted it would appear (1) that, in the interests of safety, the earthing of the neutral pole ought to be not only "allowed" for one class of main, but insisted upon for every class; (2) that, regarded from the standpoint of the present paper, it is evident that, for medical employment, the safeguards already recommended[9]—viz., the placing of the patient on the neutral pole and his effective insulation from earth—would become absolutely imperative; (3) that a still higher resistance (between the mains) would become necessary in the sliding shunt rheostat[10]; and (4) that with "the neutral" earthed and the above precautions taken safety is secured even with the increased voltage. In connexion with this report other questions of medical interest arise. Of these, one of the most important is the relative danger to life of continuous and alternating currents. The committee seem to consider that the latter are just twice as dangerous as the former. It would be interesting to know the nature of the evidence on which this opinion is based. The question has already been referred to in THE LANCET and cannot be entered upon now, but certainly it is one about which the last word has not yet been said.)

Brighton.

[8] The method of accomplishing this is not difficult, but its details might be considered to be too technical for the pages of THE LANCET.

[9] THE LANCET, Dec. 21st, 1895, p. 1571.

[10] This could easily be done by using an eight candle-power (or smaller) lamp in series with it, taking care that full incandescence is attained under working conditions.

MEDICAL MAGISTRATE.—Mr. M. B. Mackenzie, B.A., M.D. R.U.I., of Lisburn, has been appointed to the Commission of the Peace for County Antrim.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

BY J. KNOWSLEY THORNTON, M.B., C.M. EDIN.,
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(*Concluded from p. 1403 of Vol. II., 1895.*)

THE present communication brings the record of my cases to an end; the series of papers which commenced in January, 1895, gives a complete picture of my work in renal surgery, with its successes and its failures, from its commencement to the present time, and I trust that it may be useful, not only to those who are working in the same field, but also to the great body of practitioners who have to advise their patients for or against surgical interference when diseases which seem to demand the surgeon's aid arise. I have always myself derived more benefit from the carefully recorded cases of others than from the most brilliant theoretical dissertations, however thoughtful and suggestive they may have been, and I venture to think that the present series is all the more valuable because, having experimentally and practically arrived at a definite opinion as to how this branch of surgery can be best adapted to the benefit of the patient, I have in all but a very few of the early cases consistently followed the path I have marked out. When a similarly complete record of the work of any surgeon who prefers the loin incision is before the profession it will not be difficult to decide which method gives the best results in the ordinary run of cases. At present no such record is available for comparison—there are merely isolated reports of cases, and these nearly always the successful ones, which without the faithful record of the concurrent failures are of little practical value.

CASE 30.—This is a reappearance on the scene of Case 20[1] for a second operation. In a very few months after the first operation the patient, a young man aged twenty-five years, began to have hæmaturia after any extra exertion, and, later, pain in the loin became very constant and troublesome, this being also made worse by extra exertion, errors in diet, and exposure to cold. I felt convinced that either a fragment of the broken calculus or one of the minute ones, like those previously removed, must have escaped the washing out and drainage, and I advised another exploration; but he very naturally shrank from it, till increasing pain and hæmorrhage forced him to consent. I operated on Oct. 24th, 1895, cutting out the abdominal scar entirely—my invariable practice when I have to perform a second operation. He again took the chloroform very badly, giving us great anxiety several times during the operation. The trouble we had from this at the first operation undoubtedly led to a less thorough examination of the kidney than it would otherwise have received, and I overlooked a calculus in one of the calyces in the upper part of the kidney. This was a large barrel-shaped stone, with smooth surface except at the two ends, which were covered with rough and sharp points. It was about the size and shape of an ordinary nutmeg and was projecting from the calyx into the pelvis of the kidney. Doubtless the hæmorrhages were caused by the dilatation, and the pain chiefly by the blocked secretion distending the calyx behind the stone. He made a smooth recovery, and was just leaving the nursing home as I penned this record, about seven weeks after the operation. This is the second case in which I have overlooked a stone or stones in the calyces when removing a stone from the pelvis, and, though I think it is an accident which is very excusable, it is one which should not occur with an abdominal incision to aid one; and these two cases will doubtless be useful in causing both myself and others to make a thorough examination of the whole kidney, even after removal of a stone or stones from the pelvis or other parts of the organ, sufficient to account for the symptoms for which the operation was undertaken.

CASE 31.—The patient was an exceedingly tuberculous-looking young woman aged twenty-six years, who had been more or less of an invalid for several years, with symptoms of right renal calculus, the attacks of pain having of late become severe and frequent. The urine contained a great deal of pus, and, though the symptoms decidedly

[1] See THE LANCET, Oct. 26th, 1895.

pointed to calculus, I could not help fearing that we might find a tuberculous kidney. Examinations of the urine for bacilli gave negative results. I operated on Nov. 16th, 1895, and on introducing my finger into the abdominal cavity I quickly felt what I believed to be a small calculus just at the junction of the ureter and pelvis of the right kidney. She was in an exceedingly feeble condition and just at the moment became so alarmingly collapsed that I lost touch with it, and while hunting about for it came upon another, much larger, rough calculus in the pelvis of the kidney. This I removed without much difficulty, pushing it gradually out of the kidney by pressure from the peritoneum, and guiding it on the tip of my right index-finger introduced through the small loin incision into the pelvis of the kidney. I often find this plan preferable to the use of scoop or forceps; one is much less likely to break the stone—a very important matter. Having thoroughly examined the kidney, I proceeded to search for the small body I had first felt, and came upon another large, irregular, hard body which I at first thought was a stone in the ureter, but on more careful examination I found that it was a calcareous gland lying alongside of the ureter. I dissected it out, and then found and removed the small body I had felt before; it was also a calcareous gland, and a further search revealed the presence of a chain of them all down the side of the ureter. The patient had several times been in such a collapsed condition that Dr. Callender, who gave the chloroform with great care and skill, was afraid we should not get her off the table alive, and I thought it wise not to prolong the operation by attempting to remove all the diseased glands. I therefore closed the abdominal incision and placed a rubber tube beside the kidney in the loin wound. She rallied very slowly from the chloroform, and was very weak for some days, but has since been rapidly gaining strength, being much better than before the operation, both wounds having healed in rather under four weeks.

This case completes the series of ordinary nephro-lithotomies, but there are two other cases in which stones were removed from the ureter and kidney respectively, though under such complicated conditions that I do not think they can fairly be classed with ordinary cases of nephro-lithotomy, and I therefore place them in a separate class by themselves.

The first case was that of a single woman aged twenty-seven years, who was sent to me in July, 1888, by Mr. Prince, then practising at Sawston in Cambridgeshire. She had suffered from symptoms of renal calculus from the age of seven to seventeen years, when she passed a calculus and was quite well for some years, but there was always a white, powdery sediment in her urine. At Christmas, 1887, she had a sudden attack of renal colic, and the attacks recurred at intervals of ten or twelve days till she was admitted into the Samaritan Free Hospital under my care. On examination the only abnormality I could detect was a very tender swelling, about the size of a walnut, close to the entrance of the right ureter into the bladder. This I decided to explore, and on opening the abdomen on July 11th, 1888, I found a small adherent ovarian cyst filling the right side of the pelvis. This I removed, and then under it I found the swelling felt per vaginam, which was evidently a dilatation of the ureter containing calculi. I dilated the urethra and after much trouble extracted two oval calculi and a quantity of phosphatic fragments by incising the mouth of the right ureter partly by a guarded bistoury and partly by small blunt-pointed scissors. On proceeding to wash out the bladder some of the lotion and some phosphatic matter passed into the peritoneum. I sutured the opening with fine silk and carefully washed out both the bladder and the peritoneum, placing a Sims's self-retaining catheter in the former and a glass tube in the latter, with the usual sponge dressing. The right ureter was sacculated and greatly dilated, and the kidney was represented by a thin-walled bag. The left kidney was normal. On waking from the chloroform the patient displayed acute maniacal symptoms of a religious kind (she was always a poor, weak-minded girl), and the fright and shock of the operation seemed to quite upset her mental balance. The pelvis and bladder both drained well, and the abdominal incision healed, but she became more and more violent, pulling off the dressings and meddling with the tube; then the wound began to open again, the discharge became more urinous, and on the twelfth day sudden suppression set in, and she died on the thirteenth day. There was never any fever after the operation, but the pulse was quick all through, and I think her condition was undoubtedly aggravated by the absorption of urine in the pelvis; her mental condition, however, never gave her a fair chance. In any future case of a similar accident I shall make an opening from beside the wounded ureter into the vagina and drain into it, carefully suturing two layers of parietal peritoneum over the site of the injury, and at the same time remove the sacculated kidney and ureter. The urine draining from the kidney kept the deep wound from healing.

The second case was that of a widow aged fifty-one years, who was admitted into the Samaritan Free Hospital in July, 1889. She was the mother of eleven children, with a history of twenty years' suffering from right renal colic, accompanied by frequent hæmaturia. The hæmorrhage had ceased for fifteen years, but for some years there had been much pus in the urine. I found a large movable right kidney and a very tender ureter. On July 23rd I removed this kidney by abdominal incision and found a stone either in the ureter or in a dilated and prolapsed renal pelvis—I could not satisfy myself which—of the opposite kidney; this I removed by lumbar incision. The right kidney, unfortunately, ruptured during removal, and there was a considerable escape of its contents into the sac, from which I had enucleated it, but not into the peritoneum. This accident, I have no doubt, helped to bring about the fatal ending. The temperature ran up to 102·2° F. very shortly after the operation, but fell again quickly, and for the next two days the condition was altogether satisfactory, plenty of good urine passing into the bladder, besides what drained from the loin wound into the dressings. On the morning of the third day bronchitis set in, and two days later pneumonia, and she died on the sixth day. Though there was no sign of septicity in the discharge from the glass tube draining the sac, the discharge continued longer than it usually does, and I have little doubt that a septic condition the result of the accidental fouling of the sac was the real cause of death. The result was disappointing, as she promised very well for the first two days, considering the highly formidable double operation.

In November of the same year I operated upon a single woman aged thirty-two years at the Samaritan Free Hospital, and found a small stone in the pelvis of a remarkably high and small right kidney, but after prolonged efforts altogether failed to extract it, and left it, hoping that it would slip away beside or through the drainage-tube. The patient had several relapses, with increase of discharge from the loin wound in the course of a slow convalescence, but the stone was never found. She eventually got quite well, and when last heard of had had no return of renal symptoms. The only way in which I could possibly have got this stone away was by resection of a rib, my fingers being too short to guide any instrument up to the stone. This I did not think justifiable, as I felt pretty sure that this small stone would with the flow of urine find its way out into the wound, and I should think it did, though it was not found.

In June, 1888, in consultation with the late Mr. Coulson, I opened the left kidney of a young woman who was invalided and had markedly all the symptoms of calculus, including smart hæmorrhages on exertion. So confident was I that I cut into the kidney from the loin, though I could feel no stone from the peritoneum. A most careful search failed to detect anything wrong with the kidney. I drained it for a time, and then let it close up, and within a year she walked ten miles without fatigue or trouble. Such cases are very difficult to understand.

In June, 1890, I explored the kidney of a young married man with all the symptoms of calculus. He had already had an exploration through the loin performed by a leading London surgeon without result, and I failed to find anything wrong with either kidney. He recovered, but with his symptoms unrelieved.

In November, 1890, in consultation with Sir Andrew Clark, I explored the right kidney of a married woman of middle age, who was reduced almost to death's door by constant suppuration and consequent fever. I found no stone, but prolonged drainage restored her to very fair health. She continues to wear a rubber tube in the loin, but there is no discharge from the kidney through it, only she feels safer with it in.

Earlier in the same year I operated upon a married woman thirty-seven years of age, who had long suffered

with symptoms of calculus, and who had been sent by Mr. Crew of Higham Ferrars, but found only a large suppurating kidney, which healed with careful drainage, and she is now in good health. In the same year I explored the kidney of an elderly woman in very broken-down health with Mr. Robert Priestley. I could find nothing to account for the suppuration, and the patient gradually sank, apparently from the shock of the operation. This is the only fatal case I have had in simple incision and drainage of the kidney.

I have performed abdominal section in six other cases besides the above where there was a suspicion of calculus. In three I failed to find anything wrong; two of the patients got quite well and lost their symptoms, and one still has pain and occasional hæmorrhage and clamours for a further exploration. In one of the others I found a perirenal abscess which discharged itself into the pelvis of the kidney from my handling, and the patient got quite well. In the other two—one that of a man and the other that of a young woman—I found suppurating kidneys with inadequate ureters, but such unhealthy organs on the opposite side that I feared to perform nephrectomy Both are wearing rubber tubes in the kidney and a suitable receiver strapped to the side. Both enjoy very fair health so long as they keep the tube clear and clean, but at once get into serious trouble if the tube blocks or slips out, the symptoms being rapid distension of the kidney, with great pain, high fever, and constant desire to pass urine. All these symptoms at once subside on the reintroduction of the tube, but the renal region remains tender for some days. I have two young married women wearing tubes in their kidneys after attempts being made to cure hydronephrosis by incision and drainage. One has worn her tube since 1887, and the other since 1888, and both get into trouble similar to that of the above cases if the tube comes out. All four of these patients prefer to go on as they are, rather than risk nephrectomy, so that the wearing of a renal tube and urinal cannot be such a seriously disagreeable condition as one would imagine.

Besides the above cases I have twice opened through the loin very large suppurating sacs communicating with the pelvis of the kidney—once in a middle-aged married woman, who only lived a few weeks after the incision, dying from some lung complication when I was not in attendance, and the other time in a fine, strong man, who had received a violent blow over the left kidney in a yachting accident a year before I saw him. When I saw him his urine was half pus, and he had a yellow, parchment-like skin and was much emaciated, with œdematous feet and legs and an enormous swelling in his left loin. This I opened freely and drained, and he soon regained his usual good health.

One other curious case completes the record of my experience in renal surgery. A single woman twenty-nine years of age was admitted under my care in the Samaritan Free Hospital in 1885. There was a large fluctuating swelling in the left side of the abdomen, which, from the relation of the colon to it, was evidently renal or in the situation of the kidney. The left ureter could be felt per vaginam, being large and hard. She had been suffering from attacks of renal colic and hæmaturia for two years, and from childhood had suffered from attacks of pain in the left renal region about once in a year. There had also been at times similar attacks in the right side. Just before her admission the attacks had become very frequent and severe. The urine was of low specific gravity, pale, clear, and slightly albuminous. The deposit consisted of uric acid crystals, blood-cells, and a great quantity of small, round, epithelial cells. On Oct. 24th, 1885, I explored, and found the left ureter to be enlarged and tense; the right ureter was normal; the right kidney was small, but cystic and atrophic, its lower part being a mere thin-walled sac. The left kidney was hydronephrotic. I tapped it and emptied it, and then made a most careful examination of both kidneys and ureters, but could find no stone or anything to account for the cystic condition. I therefore closed the abdomen. The patient made a smooth recovery and returned home fairly well, but died in a few months with vomiting and gradual wasting away. This is one of the obscure cases, which remains as much a mystery after exploration as it was before.

The first four cases in which I opened and drained the kidney—the first nearly twenty years ago—were recorded in a paper published in the *Medical Times and Gazette* of May 6th, 1882, and I need not further refer to them. The total number of patients operated upon is 115, of whom 98 recovered and 17 died, which gives a mortality of about 14½ per cent. When one examines the cases in classes the following results are found:—Abdominal nephrectomy, 49 cases, 10 deaths; nephro-lithotomy, 31 cases, 4 deaths; incision and drainage of suppurating kidneys, 12 cases, 1 death; incision and drainage for hydronephrosis, 2 cases, no deaths; mere explorations without incising kidney, 4 cases, no deaths; cases in which the kidney was opened, but the stone not removed or not found, 2 cases, no deaths; unclassed, 3 cases, 2 deaths; and nephrorrhaphy, 12 cases, no deaths.

In conclusion, I may point out that in many of the cases recorded I have purposely omitted the name of the private medical attendant, and occasionally other details which would be likely to be recognised by the reader. It is often difficult, in reporting a series of cases, to give the essentials from a scientific standpoint and at the same time to avoid local colouring which may make the case too easily recognisable to the chance lay reader.

Montagu-square, W.

A SPECIAL MILK FOR INFANTS (CREAM MILK).

BY EDMUND CAUTLEY, M.D. CANTAB.,
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IT is a well-established fact that the natural food for an infant is human milk, and that if, for any reason, human milk is not available, cow's milk is the cheapest and best substitute. Unfortunately, cow's milk differs in composition very largely from human milk, and the preparation of a mixture of cow's milk suitable for the infant involves considerable trouble on the part of the medical adviser in giving careful directions, and on the part of the mother or nurse in carrying out these directions. Needless to say, the result is by no means always satisfactory. The object of the present paper is to bring before the profession the advantages of a special preparation of cow's milk suitable for infants and ready for immediate use.

The mode of preparation is based upon the average composition of human milk and the average composition of cow's milk as obtained in London from one of the dairy companies. The mixed milk of a large dairy company is taken as a standard for the reason that its composition is much less variable than the milk of any one cow. Human milk is a sterile alkaline fluid varying largely in its composition. Leeds obtained the following results from the analysis of the milk of about sixty women of different ages and nationalities and at different periods of lactation:—

Human Milk: Leeds' Analysis (weight in grammes per 100 grammes of milk).

—	Maximum.	Minimum.	Average.
Proteids	4·86 p. c.	0·85 p. c.	2·0 p. c.
Fats	7·00 ,,	2·00 ,,	4·0 ,,
Lactose	7·90 ,,	5·40 ,,	7·0 ,,
Ash	0·37 ,,	0·13 ,,	0·2 ,,

Other observers give somewhat different results, tabulated below for comparison:—

Human Milk: Average Analysis (weight in grammes per 100 grammes of milk).

—	Leeds: Results obtained from 60 women.	Luff: Results from the analysis made for Cheadle of the milk of 12 women.	Meigs: Results obtained from 43 women.	Rotch: Mean analysis from the results of many other observers.
Proteids ...	2·0 p. c.	2·35 p. c.	1·046 p. c.	1·0—2·0 p. c.
Fats	4·0 ,,	2·41 ,,	4·283 ,,	3·0—4·0 ,,
Lactose ...	7·0 ,,	6·39 ,,	7·407 ,,	7·0 ,,
Ash	0·2 ,,	0·34 ,,	0·101 ,,	0·2 ,,

Cow's milk by the time it reaches the consumer is acid and crowded with micro-organisms. It commonly contains

particles of various foreign bodies, such as epidermal scales, dust, manure, &c., and sometimes preservative agents. During last winter I analysed eight specimens of cow's milk, obtained from one of the dairy companies, according to these methods. The ash was estimated gravimetrically; the fats by Schmidt's process; and the lactose by Fehling's method, this proving more satisfactory than either Pavy's or Knapp's method. The proteids were calculated by estimating, by Kjeldahl's process, the amount of nitrogen in the precipitates obtained—(*a*) by adding tannic acid—total proteids; (*b*) by adding acetic acid—caseinogen; and (*c*) by adding tannic acid to the filtrate obtained from (*b*)—lact-albumin.

Mean of Eight Analyses of Cow's Milk.

Water			87·0 per cent.
Solids			13·0 ,,
Proteids	Caseinogen	2·6	4·06 ,,
	Lact-albumin	1·4	
Fats			3·70 ,,
Lactose			4·48 ,,
Ash			0·76 ,,

These results agree very closely with those obtained by other observers. Thus Leeds gives the following as the result of numerous analyses:—

Analysis of Cow's Milk: Leeds.

—	Maximum.	Minimum.	Average.
Proteids	6·0 p. c.	3·0 p. c.	3·76 p. c.
Fats	6·0 ,,	3·0 ,,	3·75 ,,
Lactose	5·5 ,,	3·5 ,,	4·42 ,,
Ash	0·9 ,,	0·6 ,,	0·68 ,,

Taking the results of my own analyses of cow's milk and Leeds' analyses of human milk as a basis, I suggested to Mr. Richmond, the analyst of the Aylesbury Dairy Company, at the last meeting of the British Medical Association, that the company should prepare a special milk for infants according to the following process. Taking an equal quantity of mixed cow's milk and a 10 per cent. solution of lactose, the whole is passed through a separator so arranged that the two outgoing streams are equal. It is thus divided into two equal parts, one of which contains practically the whole of the cream and may be termed *cream milk*, while the other contains practically no cream and may be termed *skimmed milk*. The composition of these two fluids would therefore be as follows:—

—	Cow's milk.	Separated milk.	
		Cream milk.	Skim milk.
Proteids	4·0 p. c.	2·0 p. c.	2·0 p. c.
Fats	3·7 ,,	3·5 ,,	0·2 ,,
Lactose	4·4 ,,	7·2 ,,	7·2 ,,
Ash	0·7 ,,	0·35 ,,	0·35 ,,

The Aylesbury Dairy Company kindly undertook to prepare the milk of the following quality, and supplied it for trial to the Belgrave Hospital for Children.

—	Cream milk.	Human milk.
Total solids	13·11 p. c.	13·20 p. c.
Proteids	1·82 ,,	2·00 ,,
Fats	4·02 ,,	4·00 ,,
Lactose	6·83 ,,	7·00 ,,
Ash	0·39 ,,	0·20 ,,

It will be seen from the above table how closely the prepared milk resembles human milk in composition. The milk is well taken and digested by infants, but it was found that the percentage of fat was higher than some of them could digest. The amount of fat has since been reduced to 3·7 per cent. with excellent results. It is supplied in air-tight bottles, and is previously Pasteurised at a temperature of 160° F. It is also rendered faintly alkaline.

The advantages of a milk-supply of this nature are numerous and obvious. 1. By the process of separation a large number of deleterious substances which accidentally contaminate milk, such as particles of manure, epidermal scales from the hands of the milker or the udder, hairs, dust, &c., are removed. Needless to say, such constituents are very liable to be injurious to an infant. 2. By the process of Pasteurisation the countless organisms present in milk are destroyed. It has been shown that a temperature of 160° destroys the bacilli of tubercle, typhoid fever, diphtheria, and many others. The liability of the transmission of disease to the infant by the milk-supply is consequently abolished. 3. A substitute for human milk is supplied ready for use, and the trouble involved in the methods at present adopted is abolished. That this trouble is no slight one is well illustrated by reference to the artificial substitute which Rotch recommends:—

Rotch's Mixture.

Cream (centrifugal cream, 20 per cent. fat, diluted ½ or ⅓)	2 oz.
Milk	1 ,,
Lime water (diluted ¾)	2 ,,
Milk sugar solution (lactose 3⅝ dr., water to 3 oz.)	3 ,,

This is even more complicated than the mixture which I commonly recommend:—

Cream (20 per cent. fat), 10 parts, e.g.,	1 oz.
Milk, 30 parts	3 ,,
Water, 30 parts	3 ,,
Lime water, 10 parts	1 ,,
Milk sugar, 4 parts	3 dr.

Both these mixtures involve considerable care in the preparation and the buying of four different articles. If the nurse and mother are careless or stupid it is impossible to rely on the directions being properly carried out. Besides this, cream is liable to be acid and not to mix well with the milk. 4. The milk can be diluted without altering the relative proportions of the different solid constituents to each other. No matter how much water is added, the solid constituents have the same relative ratio to each other as in human milk. Hence if a child be weakly or atrophic, or if the digestive functions are impaired, the milk may be given in a diluted form without depriving it of any one constituent rather than another, and an increased quantity may be given.

With regard to its disadvantages, the analysis shows that the total amount of proteid is practically the same as in human milk, but it must not be forgotten that the proportion of caseinogen to lact-albumin in the former is as two to one, and in the latter as one to two. Consequently, the curd produced is not as fine as in the case of human milk. Comparative tests with acetic acid give these results:—(*a*) Ordinary milk: large coherent curd. (*b*) Ordinary milk, 1 part *plus* water 1 part: small flocculent curd. (*c*) Special milk: curd rather finer than *b*. (*d*) Special milk, 2 parts *plus* water 1 part: curd finer than *c*. (*e*) Special milk, 1 part *plus* water 1 part: curd finer than *e*. (*f*) Special milk, 1 part *plus* water 2 parts: practically uncurdled. Thus the curd produced by acetic acid is a little finer than in the case of ordinary cow's milk diluted with an equal quantity of water; but considerable dilution is required in order to produce similar results to those obtained by adding acetic acid to human milk:—

Effects of Dilution of the Cream Milk.

—	Parts.	Parts.	Parts.	Parts.
Milk	Undiluted	3	2	1
Water	—	1	1	1
Proteids	1·82 p. c.	1·36 p. c.	1·21 p. c.	0·91 p. c.
Fats	3·70 ,,	2·78 ,,	2·46 ,,	1·85 ,,
Lactose	6·83 ,,	5·16 ,,	4·59 ,,	3·44 ,,
Ash	0·39 ,,	0·29 ,,	0·26 ,,	0·19 ,,

It is obvious that dilution with 1 part of water to 3 parts of milk renders the fluid only equal in quality to a moderate specimen of human milk. It is equally obvious, on the other hand, that, even diluted with 1 part of water to 2 parts of milk, it is richer in fat than the average diluted cow's milk given to infants. As a general rule, a hand-fed infant is overfed as regards quantity and underfed as regards quality. The child especially suffers from a deficiency of fat. Fed on this special milk diluted the infant will not suffer from any deficiency of any one constituent, provided that the quantity given be increased. Some infants can only digest a milk containing a very small amount of proteid; in such a case the difficulty can be easily met

by diluting this milk and giving more of it at a time or more frequent feeds. Another disadvantage is that, as a result of heating the milk to 160°, it is largely deprived of its anti-scorbutic properties. This is far outweighed by the advantage of destroying the micro-organisms present. In towns it is absolutely impossible to feed an infant on unboiled milk or un-Pasteurised milk without grave risks, and even in the country it is not safe, unless the cows are known to be perfectly healthy and the milk is obtained quite fresh. As a rule, the milk which reaches the consumer in London is twelve hours old. Centrifugalisation is not sufficient to render the milk non-injurious. I tried this special milk on several infants without having it Pasteurised, and it almost invariably caused vomiting. The higher the temperature to which the milk is exposed, and the longer the exposure, the greater the loss of its anti-scorbutic properties. Exposure to 160° for fifteen minutes probably does not lessen these properties more than boiling.

Directions for feeding.—It is estimated that a woman in full milk secretes from 700 to 800 c.c. per diem. Calculating from the lower estimate this means seven feeds each consisting of 100 c.c. = 3½ oz. A healthy infant five or six months of age will take this amount readily. It is usual in artificial feeding to calculate the amount of each feed from the weight of the child at birth, giving a hundredth part of the weight in grammes and allowing an additional gramme for each day during the first month. An infant weighing 3000 grammes (= 6½ lb.) would require therefore—

During the	first	week	30	grammes	= about	1 oz.
,, ,,	second	,,	37	,,	= ,,	1¼ ,,
,, ,,	third	,,	44	,,	= ,,	1½ ,,
,, ,,	fourth	,,	51	,,	= ,,	1¾ ,,

During the second month the amount may be increased gradually by a quarter of an ounce a week, the total amounting to 3 oz. by the end of the ninth week. From the age of nine weeks to six months from 3 to 4 oz. are sufficient for a feed, and from six to nine months from 5 to 6 oz. are enough. After the second month six or seven feeds may be given in the twenty-four hours at intervals of three hours. With this special milk I find that this is very liberal feeding and rather more than the average child requires. When the child is first put upon this milk it is advisable to give it diluted for a few days in order to gradually accustom the stomach to the change in diet. This is especially necessary in the case of children under three months of age, on account of the difference in the relative proportion of proteids from those of human milk.

Financial considerations —The Aylesbury Dairy Company have undertaken to supply this milk, and guarantee the quality, at the rate of 6*d*. a pint. At first sight this seems expensive for the consumer; but considering that it requires special preparation, Pasteurisation, and delivery in vacuum-stoppered bottles the charge is by no means high. To judge whether the expense is too great we must compare it with the cost of the supply of a mixture as at present ordered, such as Rotch's or the one I recommend. Both these substitutes require a considerable amount of cream. Ordinary cream, containing about 15 per cent. of fat, costs on an average 1*s*. 6*d*. per pint; cream containing 20 per cent. of fat costs on an average 2*s*. per pint. The cost of a supply of this special milk for an infant taking seven feeds per diem of 4 oz. each will be 9*d*. daily. The cost of an infant taking a similar amount of Rotch's mixture would be 9*d*. for the cream alone. The cost of an infant taking a similar amount of the mixture I recommend would be 6*d*. for the cream, seeing that a less quantity than a quarter of a pint could hardly be bought at once. It is clear, therefore, that an infant can be fed on this special milk at a cost less than that of the mixture Rotch recommends, and slightly, if at all, greater than that of other substitutes which provide the proper amount of fat. In addition to this, the carbohydrate is supplied in the same form as it is present in human milk—viz., as lactose; the necessity of buying and adding lime water is avoided; and the trouble of providing a suitable food for an infant is reduced to a minimum. Of course, the expense is greater than is involved in feeding an infant on weak dilutions of milk and water, with the addition of sugar and an occasional teaspoonful of cream; but it is needless to point out that infants so fed almost invariably become rachitic.

In conclusion, I wish to emphasise the advantages pertaining to the use of this milk: 1. The child receives a food containing all the necessary ingredients in proper proportions. 2. There is no deficiency of fat in the food. 3. The food is devoid of micro-organisms, and the danger of the development of tuberculosis and other diseases spread by milk is avoided. 4. The most unintelligent mother or nurse can give the food properly, the preparation consisting merely of warming the food. 5. The dangers arising from the careless use of dirty saucepans and from the use of acid, or otherwise altered or contaminated, milk are avoided. 6. The difficulty and trouble in obtaining a good supply of milk and cream of *constant* quality are avoided. 7. The medical attendant's time and trouble involved in writing out careful directions for each case are very much diminished. 8. The children thrive remarkably well upon this milk.

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CANCER OF THE BREAST.

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I VENTURE to offer some remarks on the diagnosis, prognosis, and treatment of cancer of the breast, and for that purpose now present a series of the first 100 cases of diseases of the breast observed by me some years ago in hospital practice. My notes show the diagnosis or description recorded in a few minutes as regards each case upon first seeing the patient. Each patient applied to me under the belief that she was suffering from cancer; but of the 100 cases now referred to I diagnosed 54 as malignant, 44 as benign, and 2 remained unclassified either as malignant or benign. Of the 100 patients only 13 gave a history, of any reliability, of cancer in their families, and of these 13 patients only 6 were diagnosed as suffering from malignant disease, but one of the two unclassified ones rendered a history of malignant disease in her family. Therefore, exactly 1 in 9 of the patients who were suffering from cancer yielded a history of heredity so called, and nearly 1 in 7 of the patients who were not suffering from cancer yielded a family history of that disease. I would specially direct attention to this feature, because, though it would appear now as evolved from only a consideration of 100 cases, yet this observation coincides with my general experience, and I am satisfied that nothing can be better calculated to produce an error in diagnosis than the attachment of importance to any history, either positive or negative, which may be offered in any case upon the point in question. Of the 13 patients in my list who gave a reliable history of cancer I now give the case numbers and the relative or relatives in each case affected. First, of the malignant cases: Case 2, aunt; Case 23, cousin; Case 24, cousin; Case 26, aunt; Case 47, brother and grandmother; and Case 79, aunt. Secondly, of the benign cases: Case 3, history doubtful; Case 14, cousin; Case 45, sister; Case 46, grandmother; Case 81, mother; and Case 90, aunt. Thirdly, of the unclassified cases: Case 35, mother.

In my opinion the diagnosis of cancer should be based almost entirely upon the physical characters of the breast, assisted in some instances by a consideration of the age of the patient and of conditions which may antecedently to the time of examination have created a lesion in the organ under examination. Both breasts and both axillæ, for the purposes of comparison, should always be examined. I have epitomised my notes of the hundred cases as follows[1]:—

1. S., 41. Scirrhus of the left breast and axillary glands.
2. M., 75. Scirrhus of the left breast, ribs, and axillary glands; duration four years.
3. S., 35. Chronic mammary induration and adenoma a quarter the size of a walnut.
4. M., 34. Scirrhus of the left breast and axillary glands; duration from five to six months.
5. M., 32. Adenoma half the size of a walnut in the left breast.
6. M., 49. Carcinoma of both breasts of two and a half years' duration; under medical treatment during preceding five weeks.
7. M., 46. Chronic induration of the breast and cyst; duration from two to three months.
8. M., 63. Carcinoma of both breasts; duration eight months.
9. M., 42. Adenoma the size of half a walnut in the right breast.
10. M., 64. Scirrhus of the right breast and axillary glands; duration about three years.
11. S., 11. Precocious development of the right breast.

[1] "S." means single, "M." married, and the numerals following the capitals indicate the ages of the patients.

12. M., 47. Scirrhus of the right breast and axillary glands; duration seven months.
13. M., 45. Carcinoma of the right breast; duration four months.
14. S., 23. Neuralgia of the right breast.
15. M., 31. Adenomata of the left breast; duration five years.
16. M., 41. Infiltration of the left breast; commencing malignant disease.
17. S., 18. Chronic infiltration of the left breast; benign.
18. M., 43. Scirrhus of the left breast; duration from four to five months.
19. S., 41. Node on the fourth right rib; duration five months.
20. S., 24. Capillary nævus of the left breast.
21. M., 51. Scirrhus of the right breast; duration ten months.
22. M., 48. Scirrhus (?) of the right breast; slight discharge of blood from the nipple. There were some enlarged glands in the axilla.
23. M., 68. Scirrhus of the left breast.
24. M., 67. Scirrhus of the left breast; duration two years.
25. S., 26. Chronic infiltration of the right breast.
26. M., 55. Scirrhus (?) of the right breast; duration twelve days.
27. M., 45. Carcinoma of the right breast; duration six months.
28. S., 17. Abscess of a breast; duration twelve months.
29. M., 45. Infiltration of the left breast; probably benign; duration one month.
30. M., 38. Enlarged glands connected with the left breast; duration three months.
31. S., 18. Strumous abscess of the right breast; duration eight months. Also lupus on the left cheek; duration four months.
32. M., 40. Recurrence; right breast had been operated upon for cancer four months previously at Portsmouth.
33. M., 57. Scirrhus of the left breast and axillary glands; duration thirty years.
34. M., 55. Small superficial abscess of the breast.
35. M., 41. Left breast; small, hard, circumscribed infiltration beneath the areola, and discharge of pus from the nipple.
36. S., 18. Benign infiltration of the left breast.
37. M., 47. Recurrent scirrhus; left breast operated upon two years previously at another hospital.
38. M., 41. Benign infiltration of the left breast.
39. M., 33. Mammary abscess; duration five weeks.
40. S., 30. Injury to the right nipple caused by a blow three weeks previously.
41. M., 61. Scirrhus of the left breast and axillary glands; duration eleven years.
42. M., 31. Abscess of a breast.
43. M., 61. Recurrent cancer of the breast; primary growth removed at another hospital.
44. M., 47. Recurrent scirrhus (the size of a walnut) of the left breast; operated upon sixteen months previously elsewhere.
45. M., 39. Induration of the left mamma; some retained milk which could be expressed on pressure.
46. M., 32. Hyperæmia and slight infiltration of the left breast.
47. M., 66. Scirrhus of the right breast; duration eighteen months.
48. M., 58. Scirrhus of the right breast; duration twelve months.
49. M., 58. Scirrhus of the left breast; secondary growth on the neck; duration ten years.
50. M., 40. Scirrhus of the left breast; growth the size of a walnut beneath the nipple.
51. M., 39. Scirrhus of the left breast; duration twelve months.
52. M., 46. Chronic infiltration of both breasts; benign.
53. M., 49. Benign tumour of the left breast.
54. M., 45. Secondary (recurrent?) cancer of the left breast.
55. M., 44. Tumour of the right breast size of a Tangerine orange; duration two months.
56. M., 54. Scirrhus of the left breast and axillary glands.
57. M., 42. Fear of cancer created by a blow on the breast.
58. M., 36. Tumour of the right breast.
59. M., 22. Congestion and infiltration of the left breast.
60. M., 21. Inflammation of the right breast resulting in abscess.
61. S., 21. Globular elastic tumour size of an orange in the right axilla.
62. M., 34. Induration of the left breast; benign.
63. S., 11. Hyperæsthesia of the right breast.
64. M., 42. Scirrhus of the left breast; nipple retracted; eczema of the nipple; duration four years.
65. S., 51. Scirrhus of the right breast; duration six months.
66. M., 53. Scirrhus (the size of a large orange) of the right breast; duration five months.
67. M., 62. Infiltration of the right breast, probably scirrhus; duration one month.
68. M., 43. Scirrhus of the left breast; duration fourteen months.
69. M., 37. Induration of both breasts; enlarged glands in the left axilla.
70. M., 38. Infiltration of the left breast; enlarged axillary glands; duration two months.
71. S., 42. Probably early scirrhus of the left breast; duration five months.
72. M., 29. Adenoma of left breast.
73. M., 44. Tumour the size of a walnut, probably scirrhus, in upper peripheral portion of the left breast.
74. M., 52. Advanced scirrhus of the left breast.
75. M., 38. Scirrhus of the left breast.
76. M., 54. Induration of nodules of the right breast (scirrhus?).
77. M., 44. Small, well-defined scirrhus in the left breast; the axillary glands were enlarged.
78. M., 45. Ill-defined tumour in the left breast.
79. M., 42. There is a red rash over the mammary region; the patient had been operated upon elsewhere six months previously for cancer.
80. M., 38. Operated upon three months previously for cancer; there was now a small granulating wound in the mammary region.
81. M., 36. Adenoma of the left breast; duration two years.
82. S., 51. Scirrhus of the right breast and axilla.
83. M., 67. Ulcerated scirrhus of the left breast; the glands in the axilla were the size of a small apple; duration two years.
84. M., 30. Chronic induration of the right breast; benign.
85. S., 40. Large pendulous breasts; tumour the size of a small Tangerine orange in the right axilla, beneath the borders of the pectoralis major.
86. S., 13. Mastitis.
87. M., 42. Infiltration of the left breast (simple? malignant?); duration twelve months; the glands in the axilla were not enlarged.
88. M., 47. Chronic infiltration of both breasts; benign.
89. S., 47. Adenoma the size of a nut in the left breast; duration twenty years.
90. M., 49. Enlarged glands in the right axilla; tumour removed from axilla eight months previously elsewhere.
91. M., 40. Scirrhus of the right breast.
92. S., 42. Advanced scirrhus of both breasts.
93. M., 46. Sarcoma of the right pectoral fold; enlarged glands in the axilla.
94. M., 45. Eczema of the left nipple.
95. M., 45. Chronic engorgement and infiltration of the left breast.
96. M., 41 Recurrent scirrhus of the left breast; operated upon previously at Exeter.
97. M., 48. Very large cancerous infiltration of the entire right breast.
98. M., 65. Scirrhus of the right breast; organ mobile; the glands in the axilla were slightly enlarged; duration two years.
99. S., 52. Cystic sarcoma of the left breast; too advanced for operation; duration six months.
100. M. Scirrhus of the right breast; the glands in the axilla were enlarged; the patient was about four months pregnant.

Thus the cases of 100 patients, applying for advice under the belief that they were suffering from cancer or malignant disease, were immediately diagnosed as follows: Malignant cases, 54; benign cases, 44; and unclassified cases, 2. The 54 cases of malignant disease are distinguished as under:—

1. Cases of cancer not distinguished as sarcoma and carcinoma	7
2. Cases of carcinoma not necessarily scirrhous	3
3. Cases of sarcoma	2
4. Cases of scirrhus	37
5. Cases of chronic infiltration becoming malignant (patients all over thirty)	5

The forty-four cases in which the diagnosis of cancer was rejected are distinguished as under:—

1. Benign chronic infiltration (four patients under and nine patients over thirty)	13
2. Injury	1
3. Fear	1
4. Eczema of the nipple	1
5. Mastitis	1
6. Cyst	1
7. Precocious development	1
8. Node	1
9. Neuralgia or hyperæsthesia	2
10 Abscess	6
11. Nævus	1
12. Adenoma	7
13. Non-malignant tumours and enlarged glands	8

The two unclassified cases were Nos. 35 and 87. The respective ages of the seven patients affected with cancer (not distinguished as carcinoma or sarcoma) were as under:—Case 80, 38; Case 32, 40; Case 79, 42; Case 13, 45; Case 54, 45; Case 97, 48; and Case 43, 61. The respective ages of the three patients affected with carcinoma (not necessarily scirrhous) were as follows:—Case 27, 45; Case 6, 49; and Case 8, 63. The respective ages of the thirty-seven patients affected with scirrhus were:—Case 4, 34; Case 24, 37; Case 75, 38; Case 51, 39; Case 100, probably under 40; Case 50, 40; Case 91, 40; Case 1, 41; Case 96, 41; Case 64, 42; Case 71, 42; Case 92, 42; Case 18, 43; Case 68. 43; Case 73, 44; Case 77, 44; Case 12, 47; Case 37, 47; Case 44, 47; Case 22, 48; Case 21, 51; Case 65, 51; Case 82, 51; Case 74, 52; Case 66, 53; Case 56, 54; Case 33, 57; Case 48, 58; Case 49, 58; Case 41, 61; Case 67, 62; Case 10, 64; Case 98, 65; Case 47, 66; Case 83, 67; Case 23, 68; and Case 2, 75. Of these, therefore, the youngest was aged 34 and the oldest 75. There were 15 between 35 and 45; 10 between 45 and 55; 7 between 55 and 65; and 3 between 65 and 75 years of age. The respective ages of the two patients affected with sarcoma were: Case 93, 46; and Case 99, 52. The respective ages of the five patients affected with chronic infiltration in which malignant disease had probably begun were: Case 69, 37; Case 70, 38; Case 16, 41; Case 76, 54; and Case 26, 55.

A cursory perusal of the foregoing list of cases is sufficient to demonstrate that the recognition of cancer occurring in the breast is often very easy and sometimes very difficult. The points upon which a differential diagnosis should be based are found in the text-books and in other medical and surgical literature. Scirrhus, as being by far the most common variety of cancer which attacks the breast, is that which merits most attention. A solitary neoplasm of the size of a hen's egg, not deeply embedded in abundant mammary tissue, and accompanied or unaccompanied by glandular implication, will not present difficulty; but there is a large group of scirrhous cases in which the disease has arisen out of antecedent infiltration of years' duration, and is appearing most insidiously at various points scattered throughout the unhealthy organ. There may be some retraction of the

nipple, and cord-like processes may be felt buried in the mammary tissue. The consistency of the breast varies in different individuals, and its objective quality also varies with the degree of adipose tissue superjacent. Both breasts may present characters strongly suspicious of incipient scirrhus, but if both organs were removed the microscope might fail to detect evidence of scirrhus in either. An exploratory incision may be made and a fragment of suspected tissue removed and examined microscopically; but, though the result be negative, cancer may still exist in other parts of the organ. If surgeons feel unable to say definitely whether in any case cancer exists or is absent, I really think the responsibility of choosing the course to be pursued should, after full explanation, be left entirely to the patient.

"Cancer of the breast rarely occurs in a woman under forty," remarked the late Sir William Gull to me one day; "now, the breasts are no good to any woman over forty. If every woman at forty were to have her breasts removed cancer of the breast would be almost unknown. When the breast has been removed the organ is non-existent and cancer cannot attack it." All this is true and strict logic; but where are the candidates for Sir William Gull's prophylactic treatment? *Certa pro incertis non relinquenda.* It is now generally admitted that, if taken in time, cancer of the breast can usually be eradicated completely by excision of the organ. That is a certain method of treatment, but, though attended by little danger, most repugnant to the patient. A woman will desire to try every known treatment, no matter by whom recommended, before submitting to the loss of a breast and to a cutting operation. Can cancer of the breast be cured by electricity or even arrested for more than a short period, and is this method devoid of danger?

As to the duration of cancer from its commencement to its termination by the death of the patient—when its course is uninterrupted by art—the period of duration varies considerably, not only by reason of the variety, but also to some extent by circumstances the nature of which is not yet understood. In the preceding list the statements as to the duration of the disease before my interviews with the patients mean nothing more than their own ideas, sometimes approximately correct and sometimes very wide of the mark. In many of the cases the duration of the disease before it had attained the magnitude presented to me has been considerably understated. A scirrhous neoplasm will take at least months from its earliest origin before it can attain dimensions appreciable to the surgeon's finger, and longer still before it can evoke symptoms recognisable by the patient. The duration of the antecedent precancerous period may be stated by years. Case 33 is important and exceptional. It is that of a woman fifty-seven years of age, who gave a definite statement that she had "had a lump since a girl seventeen years old, when she had a blow" on the left breast. Yet after a lapse of thirty years the disease was not too far advanced for operation. Compare this case with Case 66, and let it not be inferred, when scirrhus first appears, that a delay of thirty years before resorting to operation is advisable. The procrastination which occurred in Case 33 (where the disease ran an abnormally slow course) only shows more eloquently than words can express it how much the use of the knife is dreaded. The case, however, illustrates the undoubted fact that scirrhus may run a very long course before it causes death, and that a scirrhous neoplasm may attain considerable dimensions before it creates distressing symptoms or injury to the general health. In view of these circumstances, whilst it is true that operations of magnitude are now successfully and constantly performed upon octogenarians, yet when women of very advanced life become affected with scirrhus of the breast it may be quite an open question whether removal of the organ should be undertaken or the patient be permitted to be released by death, though unrelieved by surgery. A partial excision of the breast skirting the scirrhus is to be strongly deprecated, as such an operation is sure to be followed by recurrence. It is with some reluctance I add—because I believe it is already recognised by the profession—that the prognosis of scirrhus of the breast, if the case be treated by early and liberal excision of the gland and complete removal of all infected tissues, lymphatic and otherwise, is most favourable, and that the percentage of recurrences should be exceedingly small. It should, therefore, be remembered that, except in the case of cancer of small dimensions, no attempt should be made to limit the width of the preliminary incisions, in order that the cutaneous margins may be approximated and the wound completely closed. If this course be adopted too little of the infected integument will probably be removed and recurrence follow. The oval should usually be wide—too wide for its margins to be approximated—the intervening gap being allowed to close by granulation, and cicatrisation promoted by skin-grafting. The view is now probably acceptable that even where the disease is so far advanced as to necessitate the removal of considerable portions of the pectoral muscles, besides complete clearance of the axillary space, yet the danger to life from such an operation is small and the prospect of non-recurrence considerable.

Seymour-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF THE WHOLE EPIPLOON FROM THE SAC OF A STRANGULATED HERNIA; RECOVERY.

BY W. J. COLLINS, M.S. LOND., F.R.C.S. ENG.,
FELLOW OF THE UNIVERSITY OF LONDON.

A MAN aged thirty-eight was admitted under my care into the London Temperance Hospital on April 24th, 1895. Although otherwise a healthy man, he had suffered from a reducible right inguinal hernia for eighteen months, for which he had worn a truss. Two days before his admission, when walking home after a heavy meal, the truss suddenly broke and the hernia came down with a rush. He was unable to effect reduction, began to vomit, and experienced great abdominal pain. On admission he was found to be suffering from frequent green vomiting; no motion had been passed for two days, and his temperature was 98·8° F. The abdomen exhibited partial distension and an accentuated "mesenteric" line; the right side of the scrotum was distended to its maximum capacity by a dull, slightly elastic, irreducible swelling ten inches in circumference, without impulse, and passing into and distending the external ring. He was placed under chloroform, and, taxis being unavailing, I exposed and opened the hernial sac. A little fluid escaped, and I was confronted with an enormous mass of omentum in fringe-like laminæ occupying more than seven-eighths of the sac. At the upper part, and concealed by the omentum, there was a knuckle of deeply congested and slightly shaggy small intestine. After examination this was reduced. To reduce the omentum was a task that might give pause to Sisyphus; moreover, inspection showed that in parts there was evidence of bruising, which militated against the attempt. To deal with such a mass piecemeal appeared to me to be less satisfactory than to treat it *en masse* as a pedicle, so I tied it securely with the largest-sized silk and cut off what appeared to be practically the whole, or nearly the whole, epiploon. I thought it well to fix the pedicle in the ring by a few sutures. I then dusted on iodoform and sutured the wound without drainage, dressing with cyanide gauze. On the 29th the wound was dressed for the first time. The temperature had not risen above 100°; there was no sickness, and flatus was passed. The wound was doing well, with the exception of a little pus around one of the upper suture holes. By May 1st some eczema had appeared around the wound, and also some swelling about the scrotum; the patient's general condition, however, was excellent. On the 7th the bowels were acting, and the wound was healing, excepting at the upper end; and on the 14th the deep suture came away, the wound closing up. On May 20th the patient was discharged with a firm cicatrix, he being quite well.

When seen in August last the patient was in good health, and there was no hernial protrusion. An examination of the removed omentum showed it to be practically the whole epiploon. Its central cavity was easily demonstrable.

Albert-terrace, N.W.

NOTE ON A CASE OF PLACENTA PRÆVIA.

BY R. A. BAYLISS, L.R.C.P. LOND., M.R.C.S. ENG.

ABOUT midnight on June 16th, 1895, I was called to visit a married woman, the messenger (her husband) informing me that she was "flooding badly" after having been in labour

some hours. On my arrival, shortly after 1 A.M., at the house, which was distant about six miles, I found the patient, a pale but well-nourished woman, in active labour, the pains being frequent and strong. The nurse in attendance stated that to all intents and purposes the labour had gone on normally until about two hours previously, when profuse hæmorrhage had occurred. Since that time the pains, though coming on at short intervals, were ineffectual in bringing about the birth of the child. She showed me an ordinary chamber utensil very nearly full of blood, and said that she had emptied away a like quantity. On examination the os was found to be fully dilated and distended anteriorly by a tense bag of membranes, while posteriorly a spongy mass could be felt, which was evidently the placenta. There appeared to be no definite presentation, but the finger, passed high up, revealed the presence of portions of the limbs of the child in the vicinity of the os. The patient seemed to be in great distress, tossing herself about on the bed, and her pulse was rapid and feeble. After rupturing the membranes I introduced the hand (previously antiseptically anointed) into the uterus, with some little difficulty seized the left foot, which I brought down into the vagina, and eventually delivered her of a stillborn premature child. The placenta was expressed with ease, the uterus contracted well, and there was no subsequent hæmorrhage. At the expiration of twenty-four hours she had a moderate rise of temperature. The uterine cavity was therefore douched with a 1 in 4000 solution of perchloride of mercury, and on the following day the temperature was normal. A day or two later she had a troublesome attack of diarrhœa, which, however, was effectually controlled. After this time, though very anæmic, she gradually gained strength and about two months later went to a seaside convalescent home.

The chief point of interest in this case seems to me to be due to the fact that the membranes remained intact for so long a time, thus acting, as it were, like a hydrostatic plug to the os and thereby preventing more serious and possibly fatal hæmorrhage.

Spondon, Derbyshire.

PERFORATION OF THE AORTA BY A BONY OUTGROWTH FROM THE SIXTH RIB.

By E. A. LIGHTBURNE, L.R.C.P., L.R.C.S. EDIN.

A REMARKABLE and uncommon cause of death was disclosed at a post-mortem examination made by me recently on the body of a boy aged twelve years, who had died very suddenly without any previous illness. All the organs were perfectly healthy with the exception of a small portion of the left lung lying over the neck of the sixth rib on the left side. Further examination showed that a bony outgrowth from two to three inches in length sprang from the anterior surface of the sixth rib at a point between the neck and the tuberosity. This spicule had penetrated the lung and the thoracic aorta, causing almost instant death by hæmorrhage into the left pleura. The outgrowth was very firmly attached to the rib and had the appearance of having been there since birth. At the spot where the lung had been pierced there was hardening of the tissue, but no sign of abscess.

Bow-road, E.

NOTE ON A CASE OF HEAVY FŒTUS.

By D. J. F. BENNETT, M.B. IREL.

MR. W. WOODWARD'S interesting clinical note in THE LANCET of Dec. 14th, 1895, reminds me of a case I attended in August, 1893. I was then acting as locum tenens for my friend, Mr. C. J. McFarlane of Stoke Newington, and remember the case distinctly, but did not at the time think it worth reporting, as others were on record where the child had been much heavier. The labour was proceeding very slowly, and I applied the forceps, but removed them after some time, as the perineum seemed to be in danger of giving way. Things remained *in statu quo*, however, and I found it necessary to reapply the instrument. The shoulders gave some trouble, and it was only with difficulty I could get my finger within the axilla. It was a male child, and was, unfortunately, stillborn. I had it carefully weighed and found it to be just over 14 lb.; I regret not having taken the length. The perineum was in no way lacerated, and the mother made a very good recovery. She was a slight woman, about 5 ft. 4 in. in height and about twenty-seven years of age; it was her third pregnancy. The father was aged about thirty-three and well over six feet in height. Many of the readers of THE LANCET will be aware that, according to the statistics of over 8000 cases given in Smellie's "Midwifery," the greatest weight of a new-born child was 13¼ lb.

Hillingdon-street, S.E.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

COLONIAL HOSPITAL, GIBRALTAR.

A SUCCESSFUL CASE OF TREPHINING OF THE SKULL FOR TRAUMATIC EPILEPSY AND HEMIPLEGIA; REMARKS.

(Under the care of Dr. WILLIAM TURNER.)

IN cases of traumatic epilepsy the results of operation have been decidedly encouraging, and in many instances entire relief has been afforded. Mr. Chiene says[1] that he has only seen good arise from operation in cases of distinctly traumatic origin, particularly in those in which the injury involved motor areas near the fissure of Rolando. He considers that future improvements will be mainly in the technique of the operation and in more extensive removal of bone. The sufferers from traumatic epilepsy can lose nothing in the present day by submitting to an exploratory operation, for the procedure is perfectly safe with modern precautions, will not make the patient worse, and may cure. Recurrence of the epilepsy after operation,[2] when a portion of brain has required removal, is in some instances, no doubt, due to the cicatrix, which is again produced, but from the conditions present the scarring is likely to be much less marked than that following the injury itself. Putting together the statistics of Laurient, Agnew, and Starr, we find a record of 201 cases of epilepsy treated by trephining, the large majority being evidently traumatic. Of these, 71 are said to have been cured, 63 improved, 41 not improved, 2 were worse after operation, and 14 died. In the remainder the result was doubtful. We cannot enter into a consideration of the various sequelæ to injury which may cause epilepsy, they are numerous. The following is an example of successful operation where an unusual condition was present.

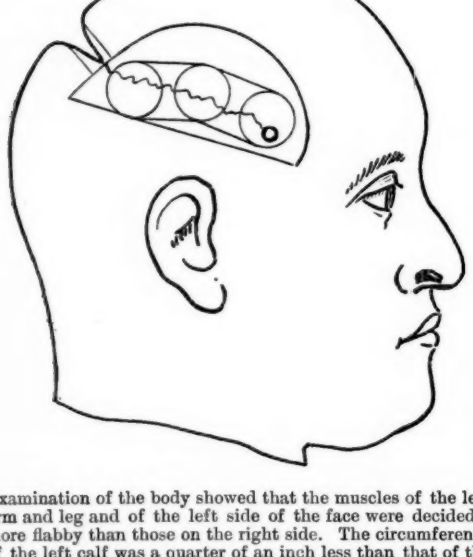
The patient was a seaman aged thirty-nine years, a native of Las Palmas (Grand Canary). He was admitted to hospital complaining of partial motor paralysis and numbness in the left half of his body, face, and in his left limbs, of severe headache, constant drowsiness, defective eyesight and memory, and impairment of speech; epileptiform convulsions occurred frequently. As regards his history, four years previously, when in Cuba, he was struck on the head by a large iron crane-hook and was insensible for seven days, having sustained an extensive depressed fracture across the vertex of his skull. On being restored to consciousness he was told that during these seven days he had had frequent severe convulsions, his body having been maintained for lengthened periods in a state of tonic spasm. The convulsions subsequently recurred at intervals and were of the following nature. The spasm commenced in the left forearm, quickly extending up to the shoulder and down the side to the left leg. It then attacked first the left and then the right side of the face, when the patient fell to the ground insensible. This sequence of events was accurately observed in each of the attacks. The patient could foretell the onset of an attack several minutes before its occurrence, which generally allowed him time to summon assistance. The frequency and severity of the fits steadily diminished for a

[1] Edinburgh Medical Journal, 1894.

[2] Erichsen: Science and Art of Surgery, tenth edition, vol. i., p. 782.

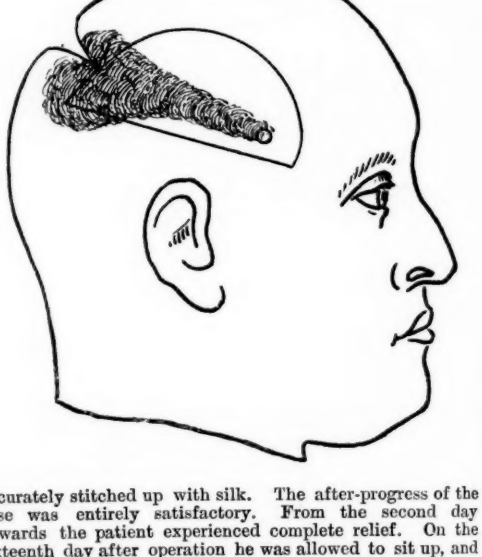
time. At first they recurred twice daily, or oftener, with complete unconsciousness; but for the previous six months the patient had been attacked about every eight days with clonic convulsions in the parts above mentioned, preceded by noise in his head, but without complete loss of consciousness or his falling to the ground. The loss of power in his left limbs at the time of his admission to hospital was very marked indeed. His gait was shuffling, and the grasp of his left hand was less strong than that of his right by at least two-thirds. His mental faculties were greatly blunted, being suggestive of a form of dementia; indeed, he was said to have made an attempt on his own life during a recent voyage. On examination of the head there was found at the vertex of the skull a deep transverse furrow admitting the tips of three fingers to a depth of half an inch. It extended horizontally across the head a little above the lambdoidal suture, five inches above the occipital protuberance. It was two inches and a half in extent, and was almost symmetrically placed as regarded the two sides of the head. The scalp was inverted over its margins, and hair grew deeply in the cleft. At or near the inferior angle of the right parietal bone a small discharging sinus was discovered. A probe passed into this sinus took a direction backwards, upwards, and to the left, inside the cavity of the skull, towards the depression at the vertex, penetrating a distance of four inches. Evidence of dead bone was thereby elicited.

FIG. 1.



Examination of the body showed that the muscles of the left arm and leg and of the left side of the face were decidedly more flabby than those on the right side. The circumference of the left calf was a quarter of an inch less than that of the right, and the same was the case as regarded the arms. The reflexes were equal on the two sides and were apparently normal. The palate was normal in appearance, but the tongue was protruded a little to the left. There was defective movement in the muscles of the left angle of the mouth, causing a hissing in speech. Hearing, taste, and smell were apparently normal. Vision was slightly hypermetropic, and the patient stated that he was unable to read, because he could only see single letters, not a whole word at a time. At his urgent request operation was resorted to. The whole head having been shaved and carefully prepared beforehand, a crescentic incision was made in the scalp commencing one inch in front of, and one inch below the level of, the sinus opening (see Fig. 1). It was carried upwards over the parietal region, and, curving round, terminated within three inches of the occipital protuberance. It crossed the line of depression in the bone at right angles close to its right extremity. The flap so marked out having been reflected downwards over the ear, a fissure in the parietal bone was discovered extending diagonally across it from the right extremity of the depression to the position of the sinus opening near the anterior inferior angle of that bone. Two other incisions in the scalp, at right angles from the crescentic one, were now made along the edges of the depression (see Fig. 1), and the scalp was so lifted, upwards and downwards, as to expose freely the whole of the depression in the bone. The periosteum was next reflected from both sides of the fissure. Three trephine openings were made with a one-inch trephine in the parietal bone along the course of the fissure, and the portions of bone intervening between these openings were cut away with saw and pliers (see Fig. 1). It is estimated that four and a half square inches of the bone were in this way removed, freely exposing to view the entire track of the subjacent sinus. The latter was found to terminate posteriorly in a large abscess cavity containing a loose sequestrum of some size of the inner table of the skull. In addition to the sequestrum the cavity contained a quantity of soft muco-purulent material. These were carefully cleared away, and the interior of the cavity and of the sinus track freely scraped with a Volkmann's spoon. The dura mater was not opened as no evidence of suppuration beneath it presented itself. The abscess cavity (see Fig. 2) was thoroughly washed out with sublimate solution and the periosteum was stitched over with fine catgut, none of the pieces of bone removed having been replaced. A rubber drainage-tube was inserted into the cavity, where the sequestrum had previously lain, and the scalp flaps were

FIG. 2.



accurately stitched up with silk. The after-progress of the case was entirely satisfactory. From the second day onwards the patient experienced complete relief. On the sixteenth day after operation he was allowed to sit up, and he then declared that he had equal strength in both arms and legs, that he was free from headache, and that he had had no return of the epileptiform attacks. He was in excellent spirits, presenting a totally different aspect from the torpid demeanour he exhibited on his admission, and he expressed himself as being deeply grateful for the relief afforded him by the operation. He was discharged from the hospital two months after the operation, having been employed in useful work in the wards for some time previously. Before leaving he assured Dr. Turner that he had completely regained his original vigour and inclination for work. His vision was good and he could read well. His speech was no longer aphasic, the grasp of both hands was equally strong, his gait was free from defect, numbness had disappeared, his intelligence was sharp beyond the average of his class, and there had been no recurrence of the convulsive attacks. He returned to Las Palmas in order to resume his active duties as a sailor.

Remarks by Dr. TURNER.—Cases similar in nature to the one under consideration will present themselves from time to time in the practice of most maritime hospitals—cases, I mean, pre-eminently of seamen who have sustained injury to

the head in the exercise of their calling, and who have subsequently become epileptic, and so unfitted for further employment at sea. Hitherto I have not ventured to interfere surgically for the radical relief of such conditions, but have for the most part contented myself with the employment of medicinal remedies for their amelioration, or have passed them on with a recommendation to the care of a recognised specialist in this department of surgery. In the present case, however, operation was urgently called for. The patient had no means of obtaining the services of a specialist, and he declared that his life was well-nigh intolerable in consequence of his affliction, his disabled condition rendering him totally unfit to earn a livelihood in any capacity. Under such circumstances no surgeon acquainted with the modern development of cranial and cerebral surgery, as practised at the hands of such operators as Horsley and Macewen, and having at his disposal the means for maintaining wounds in an aseptic condition, would feel justified in withholding his hand and denying his patient the chance of possibly permanent relief by operation. It is impossible as yet to predict whether an absolute cure can be claimed in this case. A long period must elapse (five years according to Horsley) before it can be said that a recurrence of epilepsy may not take place in such cases. Yet the focus of disease has been removed, and it may at least be hoped that the secondary changes which must have been set up in the brain cortex during the four years of existence of the irritant may also to a great extent be restored to a healthy state. The case was one in which, apart from the expressed desire of the patient, operative interference was eminently justified. The conditions were such that no question remained as to the localisation of the lesion within the skull. The site of the lesion also was to all appearance easily accessible, and the area effected, though extensive, was most probably limited to parts readily exposed by the trephine. One disturbing element was the possibility that the longitudinal sinus might be injured in the attempt to remove the whole of the depressed bone, for the fact that the convulsions affected in their course the right as well as the left side of the face lent probability to the suspicion that the irritant cause might lie partly in the right and partly in the left hemisphere, and so involve the longitudinal sinus running between them. Wounds of the longitudinal sinus, however, as I have found from experience of several cases, are less serious, and the attendant hæmorrhage less difficult to control than *a priori* one would be led to expect. There was also in this case the possibility that abscess formation might be discovered affecting the brain substance either in the form of diffuse purulent infiltration of the cortex (disseminated abscess) or as an encysted accumulation of pus. Each of these contingencies had to be borne in mind in deciding as to the risks and method of operation. As matters turned out, however, the abscess cavity was found to be limited to the right side of the head, reaching so close to the middle line as to expose, but not to involve, the longitudinal sinus, and, so far as was ascertained, did not in any way, except by pressure, involve the substance of the brain. Referring to the literature of trephining for traumatic epilepsy, one finds that great diversity of opinion exists amongst writers as to the advisability of operative interference and as to the results to be anticipated from such operations. Keen of Philadelphia states[3] that in cases of traumatic epilepsy the results of operation have been on the whole very encouraging. He estimates that in perhaps 25 per cent., more or less, the result will be a practical cure. Hayes Agnew[4] records fifty-seven cases of trephining for traumatic epilepsy. Of these forty-one recovered from the operation, thirty-two of these experiencing temporary relief, and nine obtaining no benefit. He concludes that trephining for traumatic epilepsy promises only palliation at best. In a paper on the Surgical Treatment of Epilepsy by Gerster and Sachs of New York,[5] a detailed account is given of ten operations for the relief of epilepsy, with the result that not a single cure was claimed. They maintain that if operation is undertaken in cases which have run a course of many years, removal of the initial disease will have little effect on the general sclerosis which will have been established, and which keeps up, as it were, the epileptic habit. They recommend "that the only way to cure epilepsy is to prevent its development by prompt interference to remove the focus of disease before secondary changes have been set up." The question of chief practical importance which a case such as the above suggests for discussion, and on which I venture to offer some remarks, is—When, under what circumstances, and in what varieties of fracture of the skull is operative interference called for, and under what conditions may an expectant line of treatment with propriety be adopted? In no department of surgery has the introduction of the aseptic treatment of wounds more widely influenced our practice than in this, and thus it will be found that the rules so ably formulated and taught in former years are no longer suitable to guide the surgeon. In considering this subject it is necessary not only to bear in mind the different varieties of fracture of the skull which are met with—the simple, the compound, the comminuted, the punctured, the linear, and the depressed—but also to note their position in relation to important intracranial blood-vessels and nerve centres of the brain cortex—whether the fracture is recent or of old standing, whether single or multiple, whether or not accompanied by brain symptoms, and, most important of all, to observe what the nature and severity of these symptoms may be. 1. All authorities are agreed that linear fractures or fissures of the skull, whether simple or compound, if unaccompanied by symptoms of irritation or compression of the brain, should not be interfered with primarily, but call forthwith for operative treatment if these or inflammatory symptoms should subsequently supervene. 2. With reference to depressed fractures unaccompanied by symptoms the practice of the present day appears to be distinctly at variance with that of former times. The old rule was that simple fractures of the skull with depression and without symptoms should be left alone, and even where comminution of the bone coexisted with depression, provided there were no symptoms, non-interference was the policy adhered to. The dictum of Hayes Agnew[6] probably expresses the view of most operating surgeons of the present day—namely, "that *all* fractures of the skull attended with depression, however slight, and entirely independent of symptoms, should, in view of the late after effects, be submitted to the trephine." This rule does not, of course, include those not uncommon cases of spoon-shaped depression in the skulls of young children, where the bones are merely bent after the fashion of greenstick fractures in the long bones, and are so pliant that in the majority of cases they recover their original shape within a very short time without the aid of any treatment. 3. In cases of compound depressed fracture without symptoms the rule to operate admits of no compromise, and many of the older surgeons were as rigid observers of it as modern operators. In cases undoubtedly of this nature patients have been known to recover spontaneously without any ill-effect remaining; indeed, I have notes of a case of punctured and depressed fracture of the vertex which came under my notice some ten years ago, where brain matter escaped freely from the wound, and where the probe was passed for some distance into the brain in search of foreign substances, and yet the patient recovered perfectly without any operation having been resorted to, and is still in good health. But the risk of subsequent mischief—epilepsy, insanity, pyæmia, &c.—being developed even at remote periods in these cases, with the mental unrest thereby occasioned to the individual for the remainder of his natural life, renders the immediate operation of trephining strongly to be insisted on. 4. Every case of fracture of the skull accompanied by brain symptoms, paralytic or irritative, has to be dealt with on its own merits, and it would be impossible to lay down any definite rules for the management of such cases. Generally speaking, if the symptoms are not severe and show evidence of yielding, the case is treated on the same principles as those already indicated for fractures unaccompanied by symptoms. If, however, symptoms of pressure or irritation show no disposition to yield after trial of the expectant plan, or if they tend to increase in severity, then, even apart from the character of the fracture, and all other considerations being set aside, it is the surgeon's duty, if he can reach it, to expose by trephine or otherwise and to remove if possible the irritant cause from which these symptoms appear to originate. A thorough knowledge of localisation of the different brain centres (so far as they are known) here becomes indispensable, for it will sometimes happen that the very existence of a fracture is revealed mainly by reference to the symptoms, and a guide to the exact seat of fracture will be furnished by those

[3] Medical News, Nov. 1st, 1890.
[4] New York Medical Record, Sept. 26th, 1891.
[5] American Journal of the Medical Sciences, November, 1892.
[6] Loc. cit.

symptoms. 5. There is yet another class of cases to which I would call attention—namely, those in which there is a history of severe injury to the head, and where there are marked and definite symptoms of compression of certain motor areas of the brain, but where no fracture of the skull can be demonstrated. In such cases obviously one of two conditions exists: either a fracture of the skull implicating the motor area has taken place, although it cannot be detected, or a hæmorrhage has occurred in or near the motor area or tract. The history of the case may or may not assist the surgeon in arriving at a correct diagnosis, but the point of importance to him is—How are such cases to be dealt with? If the pressure be due to blood-clot, and there is no evidence of the extravasation extending, then the expectant method will be applicable for a time; but if the symptoms point to a gradual increase of extravasation I see no reason why a trephining operation should not be resorted to in the hope of securing the injured vessel and relieving pressure. If, on the other hand, an undetected fracture should be the cause of the symptoms, and amelioration of these does not speedily set in, trephining over the indicated motor area will be not only permissible, but will in all probability be followed by the happiest results.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Accessory Tumour of the Thyroid Gland.—Rupture of Splenic Artery into Stomach.—Gummata of Brain.—Interstitial Hernia.—Lichen Scrophulosorum.

AN ordinary meeting of this society was held on Jan. 7th, Mr. BUTLIN, President, being in the chair.

Mr. A. E. BARKER related the sequel to a case of Accessory Tumour of the Thyroid Gland, the clinical history and structure of which he had already recorded. The tumour commenced to grow above the left clavicle in 1880, and in 1889, when the patient was operated upon, he was fifty years of age. The tumour occupied the whole of the left side of the neck, from the mastoid above to the clavicle below; it extended beneath the trapezius behind, while forwards it passed under the jaw and transgressed the middle line of the neck, pushing the larynx with the thyroid gland to the opposite side. The skin covering it was thin and tense, and the growth was filled with cysts which varied in size from that of a marble to that of an orange. It was firmly fixed to the under surface of the sterno-mastoid, but this might have resulted from the many electrolysis punctures to which the growth had been subjected. There were no enlarged lymphatic glands. The first operation was performed in 1889 and much cystic and solid matter removed, and the histological details were described at the time The patient was now in excellent health, though there had been four operations for recurrence. The recurrent growths appeared to be limited to the glands of the neck, and they reproduced the structure of the original growth. He thought there was no doubt that the primary growth originated in an accessory thyroid gland, though it might have started from the border of the thyroid gland and gravitated downwards. The repeated recurrence in the lymphatic glands indicated a mild degree of malignancy; but perhaps, on the other hand, these multiple secondary deposits were buds or germs of the original growth, which had escaped removal. Another view which he put forward was that he had possibly removed the whole thyroid gland at the first operation, and that these secondary masses were to be regarded as remnants of gland which had undergone a compensatory hypertrophy to replace the removed thyroid gland rather than as dissemination of a primary malignant growth.—Dr. CYRIL OGLE showed a Cystic Accessory Thyroid Gland which he had removed post mortem from a woman aged fifty-five, who died from an accident. The tumour measured one inch and a half by three-quarters of an inch, and lay between the top of the sternum and the trachea. There was in addition irregular enlargement of the left lobe of the thyroid gland. On section the smaller mass presented the characteristics of thyroid gland, but without the colloid contents.—Mr. SHATTOCK mentioned the fact that papilliferous ovarian cysts sometimes ruptured into the peritoneum and produced a crop of papillary formations derived from the primary growth, but which were not malignant. Mr. Barker, as a result of the first operation, might possibly have infected his wound in this way. The multiplicity of the secondary growths was against the accessory thyroid gland hypothesis.—Dr. NEWTON PITT referred to the case of a woman who had a scarcely noticeable enlargement of the thyroid gland, and from whom a tumour of the eye was afterwards removed, and others recurred in the scalp and skin, all presenting the characteristics of thyroid tissue. The viscera did not appear to be involved so much as the skin and glands.—Mr. JACKSON CLARKE had examined a case a year ago for Mr. Ernest Lane. The specimen was that of a lymphatic gland lying beneath the sterno-mastoid muscle and showing a growth with tubular and papilliferous processes. The structure of these secondary growths suggested that the thyroid gland was of racemose structure, as Virchow had held.—The PRESIDENT referred the specimens to the Morbid Growths Committee. He had never seen multiple growths produced as the result of operation. There was a class of tumours belonging to the thyroid gland in which secondary tumours of similar structure were produced. One of the first was brought before the Pathological Society by Mr. Henry Morris, and in this secondary growths occurred in the skull and other bones. A photograph of the patient showed that she had an enlarged thyroid gland. Further cases had been recorded by Mr. Warrington Haward and others.—Mr. BARKER, in reply, said that the tumour shelled out completely, and he did not think that the wound could have been infected at the original operation. As he had already said, the adhesion to the sterno-mastoid muscle might have been due to the repeated electrolysis punctures.

Mr. F. C. ROBINSON showed a specimen of Rupture of the Splenic Artery into the Stomach, associated with Aneurysm of the Left Ventricle of the Heart. The patient, a woman aged fifty-seven, died in Colney Hatch Asylum after having suffered from melancholia with suicidal tendencies for six years. A fortnight before death, having a high temperature, she was sent to bed, and it was supposed that she was suffering from pneumonia. Six days later she vomited a large quantity of blood. Four days before death this was repeated, and during the last attack she died. Post mortem a large ulcer was found on the posterior superior wall of the stomach, and in the base of it was an opening into the splenic artery, which was very atheromatous. There was also present an aneurysmal dilatation of the left ventricle of the heart, which had been unsuspected during life; it contained a considerable quantity of laminated clot.—Mr. JACKSON CLARKE said that the gastric ulcer had evidently become adherent to the artery, into which it had opened later. The history suggested the advisability of opening the stomach in some cases of hæmorrhage.

Mr. C. F. BEADLES showed a specimen of Gummata of the Brain. The patient was a soldier aged twenty-eight who had been admitted into Colney Hatch Asylum in a state of acute mania. He had been invalided home from India four years before for enteric fever. While in India he had contracted syphilis, and the scars over his back, arms, legs, and feet showed that he had suffered very severely from the disease. He was very weak and much emaciated, but there were no signs of lung or heart disease. His mental state had existed for two months, and confinement in a padded room had been necessary. He was incoherent, extremely restless, and had taken but little food for some days. He had suffered from delusions. After his admission it was necessary on several occasions to feed him with an œsophageal tube. Large doses of chloral and bromide of potassium produced no effect, and one grain of hyoscyamine hypodermically gave but slight rest. During the next month he gradually gained strength, but there was no sign of mental improvement, and though he was generally weak there was no paralysis. Three months after his admission he was attacked with what seemed to be a hæmorrhagic seizure; he suddenly sank and became unconscious, but recovered within half an hour and showed no signs of paralysis. One hour later he again relapsed into unconsciousness, the pulse being very slow and intermittent, the right pupil widely dilated, and the left contracted to a pin's point. He died fourteen hours from the onset of the attack without again recovering consciousness. Post mortem the membranes of the brain were found to be

only slightly thickened and the basal vessels fairly healthy. About the centre of the right frontal lobe, near its under surface, was a hard gummatous mass which readily separated from the brain substance and was firmer and of darker colour than the brain tissue, which was softer than natural throughout. In the lower part of the left hemisphere there was discovered a second tumour of the same size and appearance as the first. It was situated at the lower and inner part of the lenticular nucleus, on a level immediately in front of the optic commissure, and was closely connected with the middle cerebral artery. Microscopically the growth proved to be a syphilitic granuloma. Notwithstanding the frequency of syphilis as a cause of insanity, gummatous tumours in the brain had been found post-mortem excessively rarely. He had searched the post-mortem notes recording the conditions present in the brain of over 4000 insane persons, and in only five instances had gummata been found. Of forty other instances, in which all varieties of intra-cranial growth were referred to, it was possible that a couple were of syphilitic origin. It should not be forgotten that gummata of the brain might disappear under treatment, but from the above figures it was highly probable that syphilitic cerebral growths were even rarer than was usually supposed, the symptoms commonly regarded as pointing to their presence being in fact due to changes in the cerebral vessels and membranes.

Mr. JACKSON CLARKE showed and described a specimen recently added to the museum of St. Mary's Hospital and comprising the Anterior Part of the Right Os Innominatum with the corresponding Peritoneum, &c. Below the position of the internal ring was an aperture in the peritoneum as large as a farthing and bounded by a thick fibrous ring. The aperture led into the cavity of a sac as large as the finger of a glove. The sac lay in front of the peritoneum at the side of the bladder, and was directed downwards along the vas deferens. The specimen had been removed post mortem from a stout man aged forty-six, admitted to St. Mary's Hospital under Mr. Norton with pain and distension of the abdomen. The patient said he had been ill for two days and had vomited twice. There was no external tumour. Abdominal section was decided on, but immediately the patient had been placed on the table an attack of stercoraceous vomiting began, and in the course of the attack he became suddenly collapsed and, in spite of artificial respiration, &c., did not rally. Post mortem the diaphragm was found to be pushed up to the level of the third space in the mid-clavicular line on each side by distension of the stomach and small intestines. The lungs were extremely emphysematous, and the lower lobes were partially collapsed. The heart was fat-laden, and its right ventricle greatly dilated and full of liquid blood. About two inches of ileum were found in the sac, and, though nipped by the fibrous neck, were readily withdrawn. There was a depression in the peritoneum opposite the internal ring, and fibrous prolongations from the depression passed into the inguinal canal, showing that the remains of the vaginal process were undisturbed, and pointing to the hernia having been of the femoral rather than of the inguinal variety. There was no evidence that a hernia had recently occupied either the crural or the inguinal canal. Apparently the truss had gradually pushed the sac back into the peritoneal cavity and had so prepared the way for the chain of events mentioned above. Death appeared to have been due to syncope, for no vomit was found in the air-passages.—Mr. RAYMOND JOHNSON thought that the specimen might be one of the forms of interstitial hernia. The sac occupying the inguinal canal had become obliterated, and the pro-peritoneal pouch formed the sac shown in the specimen.—Mr. W. M. ECCLES asked whether the sac was adherent to the surrounding tissues or appeared to be recently dislocated, and also whether there was a history of any recent swelling in the inguinal or femoral regions.—The PRESIDENT said it would be interesting if they could bring together a series of specimens of hernia after operation. He himself had operated for the radical cure of hernia last May, the patient had recently died from tuberculous meningitis, and a preparation had been made to show the result of the operation.—Mr. STANLEY BOYD said he should like to see post-mortem evidence of the cure of hernia by truss.—Mr. CLARKE, in reply, said that there had been no hernia down for twenty years.

Mr. JACKSON CLARKE also showed sections of lesions from a typical case of Lichen Scrophulosorum. The lesions had been removed from a child a few months old, whose trunk and limbs were covered with papules, for the most part flat-topped, and like those of the small papular variety of lichen planus. A week or two after the onset many of the lesions became pustular, and, as happened in some cases of eczema, small abscesses formed in the subcutaneous tissue. After opening one of these abscesses a portion of skin bearing three or four papules was found to require removal. The skin was hardened in sublimate solution, with a view to determine the genesis of the abnormal elements. One typical flat papule was found to have formed at the apex of a papilla independently of any follicle. The altered cells had pushed apart two interpapillary pegs of epithelium and consisted wholly of swollen endothelial and connective-tissue cells, without any leucocytic infiltration. The histology was quite compatible with the lesion being truly tuberculous, and Mr. Clarke asked physicians present whether any lesions of the skin had been noticed as part of a general tuberculosis. The patient improved on cod-liver oil and iron. For permission to publish the case he wished to thank Mr. Malcolm Morris.

The following card specimens were shown:—

Dr. KANTHACK: Glandular Tumour of Lip.

Dr. P. WEBER: (1) Obliteration of Coronary Artery (? Congenital); (2) Section of Coronary Artery from case of Angina Pectoris.

Dr. CYRIL OGLE: Accessory Tumour of the Thyroid Gland.

OBSTETRICAL SOCIETY OF LONDON.

The Influence of the Removal of the Ovaries on Metabolism in connexion with Osteomalacia.—The Effects of Lactation on Menstruation and Impregnation.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 1st, Dr. F. H. CHAMPNEYS, the President, being in the chair.

Professor G. EMILIO CURATULO, of the Royal University of Rome, read a paper on the Influence of the Removal of the Ovaries on Metabolism in connexion with Osteomalacia. He alluded to certain hypotheses intended to account for the benefits afforded by castration in cases of osteomalacia. He then referred to experiments on bitches made by him and recorded in the Transactions of the Edinburgh Obstetrical Society. He found that after removal of the ovaries the quantity of phosphoric anhydride excreted in the urine was greatly and for a considerable time diminished, while the quantity of nitrogen remained unaltered. The diminution of phosphates began about the seventh day and continued for three or four months. Professor Curatulo regarded this as being the result of a diminished oxidation of phosphorus, existing as an organic compound in the tissues, and which, combining with calcium and magnesium, is stored in the bones. He supposed that the ovaries produced a secretion capable of facilitating the oxidation of the phosphatic organic substances which supply the material for forming the walls of the bones, and that their extirpation leads to a greater accumulation of earthy salts in the skeleton. He mentioned some experiments he had made which tended to prove this.—Dr. AMAND ROUTH thought that the great value of this paper was the new method by which Professor Curatulo had endeavoured to explain the action of the ovarian "internal secretion." He alluded to the various ductless glands of the body and their—at present—inexplicable mode of action. He thought it not improbable that Professor Curatulo's method of examining the urinary secretion might, as in the cases now under discussion, be the means of arriving at an explanation, especially in acromegaly, where bone-tissue was also involved.—Dr. W. S. A. GRIFFITH was of opinion that Dr. Curatulo's contribution should not lead them to take too narrow a view of the subject. It was unlikely that the ovaries had an important *rôle* in connexion with the disease in women, and of course they had none in man. He had obtained specimens from the dissecting-room at St. Bartholomew's Hospital, all from subjects of advanced age. There was also another class of case occurring in childhood to which little attention had been directed. He had found specimens described as rachitis, with all the

characters of mollities ossium; and the influence of the ovaries at both the above periods of life would need careful investigation.—Remarks were also made by Mr. BLAND SUTTON and by Dr. DUNCAN.

Dr. LEONARD REMFRY read a paper on the Effects of Lactation on Menstruation and Impregnation. He had made notes of several hundred cases with the view of elucidating the above point. He mentioned the usually acknowledged relation between the functions of the breast and those of the uterus, both as regards menstruation and involution. He speculated on the condition of the endometrium during suckling when amenorrhœa is present, and then gave the results of his inquiries. These led him to the following conclusions: (1) Of suckling women 57 per cent. only have absolute amenorrhœa; (2) 43 per cent. menstruate more or less, but 20 per cent. have absolute regularity; (3) impregnation does not take place so readily during lactation as at other times, but this is not true to such an extent as has been imagined; (4) if absolute amenorrhœa is present during lactation the chances of impregnation occurring are only 6 out of 100; (5) if menstruation occurs during lactation the chances of impregnation are 60 in 100; (6) the more regular a woman is during lactation, the more likely is she to become pregnant; (7) during a menstruating lactation the changes in the uterus are presumably similar to those connected with the ordinary monthly periods, and the mucous membrane forms a nidus for the ovum; and (8) in the woman who does not suckle at all the menses appear as a rule some time in the first six weeks after delivery.—Dr. EDEN said there was no evidence of a functional relation between the mammæ and the uterus beyond the fact that stimulation of the cutaneous nerves of the nipple induced reflex contractions of the uterine muscle. According to Dr. Remfry's paper, mammary activity had no definite effect on the menstrual function, for in about half the cases there was amenorrhœa, and in the other half menstruation continued. Dr. Remfry's paper had an important bearing on certain theoretical considerations. It was now proved that ovulation and menstruation were independent processes, and there was a growing opinion among physiologists that menstruation ought not to be regarded as bearing any important relation to conception. His facts proved that physiological amenorrhœa—i.e., amenorrhœa without impairment of the general health—was an extremely unfavourable condition for the occurrence of conception. This could only be explained by the assumption that the preparation of the uterine mucous membrane by the menstrual process was a very important item in the factors of conception. If this view were accepted, however, they were met with the difficulty of explaining those rare cases in Dr. Remfry's list in which conception occurred during amenorrhœa. It must be remembered that nothing is known about the condition of the uterine mucosa in amenorrhœa. All that was meant by the term was that there was no monthly escape of blood from the uterus. That there still might be constitutional changes was proved by the occurrence of menstrual molimina in a certain proportion of cases of amenorrhœa. It was also possible that menstrual changes occurred to a certain extent in the uterine mucosa, not sufficient to cause an escape of blood by the natural passages, but enough to prepare the membrane for the due reception of the fertilised ovum.—Dr. MCCANN stated that he had been for six months collecting statistics on the subject of Dr. Remfry's paper. Without giving accurate details he was able to say, first, that the majority of women who become pregnant during lactation have menstruated regularly after their confinement; secondly, that the greater number of pregnancies during lactation commence after the eighth month; thirdly, that in most cases the supply of milk diminishes on the occurrence of pregnancy, and the monthly loss of blood ceases; fourthly, that prolonged lactation, especially where the milk-supply is copious, favours superinvolution and subsequent sterility; fifthly, that menstruation during lactation does not always recur in the same individual; and sixthly, that the amount and duration of the menstruation during lactation correspond to that of the ordinary menstruation in the same individual. Dr. McCann did not think that non-suckling was a cause of subinvolution of the uterus.—Remarks were also made by Dr. BOXALL and Dr. LEWERS.

The following specimens were exhibited:—

Mr. A. F. STABB: (1) Placenta with Insertio Velamentosa; (2) Abnormally Large Placenta, weighing 3lb.

Mr. G. GENGE (introduced by Dr. CULLINGWORTH): Compressed Fœtus (one of Twins) with Placenta.

Dr. CULLINGWORTH: (1) Large Fibro-cystic Myoma growing from the Cervix Uteri; (2) Multiple Fibro-myomata of the Uterus.

Dr. LEWERS: Pyometra complicating Cancer of the Cervix.

WIGAN MEDICAL SOCIETY.

Xerostoma.—Method of Election of Honorary Surgeons to the Wigan Infirmary.—Exhibition of Cases.

A MEETING of this society was held on Dec. 12th, 1895, Mr. W. MITCHELL ROOCROFT, President, being in the chair. The office-bearers for 1896 were nominated.

The PRESIDENT then read a very interesting paper on Xerostoma, relating very fully the clinical features of a case under his care, and also referring to the reported cases of the disease.—A discussion followed, in which Dr. REES, Mr. GRAHAM, Mr. BRADY, Mr. LOWE, Dr. BENSON, Dr. BLAIR, Mr. ANGIER, Mr. MONKS, and Mr. JONES took part.—The PRESIDENT replied.

Dr. REES moved a resolution of which he had given notice at the previous meeting—namely, "That this meeting of the Wigan Medical Society is of opinion that the present method of election of the honorary surgeons to the infirmary ought to be abolished. That this meeting also suggests to the Infirmary Committee (*a*) that canvassing by or on behalf of a candidate shall invalidate his election, and (*b*) that the election be made by a special meeting of those who are at present qualified to vote." Dr. Rees, in an appropriate speech, introduced the subject, alluding to the remarks in THE LANCET of Aug. 31st, 1895, which strongly deprecated the usual mode of electing honorary surgeons to the Wigan Infirmary.—Dr. BLAIR seconded.—The HON. SECRETARY then moved as an amendment, "That this meeting of the Wigan Medical Society is of opinion that the present method of electing the honorary surgeons to the infirmary might be abolished."—This was seconded by Mr. BRADY. Owing to the lateness of the hour the discussion was adjourned.———At a special meeting of the society, which was held on Thursday evening, Dec. 19th, 1895, the PRESIDENT in the chair, Dr. REES formally moved his resolution, which was seconded.—The HON. SECRETARY then moved his amendment, which was seconded by Mr. BRADY.—An animated discussion followed, a divided opinion being expressed as to the degradation of canvassing, the following members taking part in the debate: Dr. Benson, Dr. Rees, Mr. Monks, Mr. Brady, Mr. White, Mr. Wright, Mr. Cowan, Mr. Parker, Dr. Heyliger, Dr. Blair, Mr. France, Mr. Lowe, and the Hon. Secretary.—Dr. REES withdrew his motion, and, the amendment being put as the substantive motion, Mr. LOWE moved the following amendment, which was seconded by Dr. REES and carried by 9 votes to 7—namely, "That, in the opinion of this society, there should be some modification of the mode of election of the honorary medical staff of the infirmary, and that a committee of the Medical Society be appointed to discuss the question with the members of the board of management of the infirmary." The committee of the Medical Society, with the addition of Mr. C. R. Graham, was afterwards appointed the committee for the purpose.

Mr. LOWE showed, and made some remarks on, the following cases. The first was a case of Complicated Compound Fracture of the Femur, in which the lower end of the upper fragment pierced the quadriceps extensor cruris muscle and could not be reduced. He sawed off the end of the protruding bone and reduced the fragments to apposition, carefully sealing up the wound with sutures and dressings. Union of the wound was by first intention, and there was good union of the bone. The second was a case of Fracture of both Femora into the Knee-joints. The case had been treated with a Hamilton splint, and there was good union of the bones and very little restriction in the movements of the joints.—Several members remarked on the cases.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 18th, 1895, Dr. CRAIG, Vice-President, being in the chair.

Dr. ALLAN JAMIESON showed a case of Scleroderma Pigmentosum in an early stage. Only two similar cases had

been seen in Scotland. The patient, a girl three and a half years old, had a tuberculous family history. When twelve months old she had a roughness of the face, which appeared to be itchy, and gradually increased. The surface never oozed or became wet, but was always dry and scaly. Nine months later freckles appeared and gradually increased in number. The condition was entirely confined to the face, the skin of which was dry, scaly, and freckled, with here and there stigmata, small pinkish spots and atrophied white ones, and on the cheeks there were several warty growths with narrow red areolæ; one had fallen off, leaving a pink macular scar.

Dr. MACGILLIVRAY showed (1) a case of Excision of the Condyles of the Humerus for Dislocation with Fracture, movement being practically perfect; and (2) a case of Thyrotomy for Papillomata growing from the Ventricle of the Larynx.

Mr. COTTERILL showed a child whose illness began with a large Swelling in the Left Hypochondriac Region, and on aspiration fluid was obtained which gave the reactions of pancreatic cystic fluid. The cyst was opened posteriorly and extra-peritoneally, below the twelfth rib and between the renal vessels, which had been pushed upwards. The cyst-wall was very hard and fibrous. A drainage-tube was kept in for three months. The posterior operation seemed to be safer than the anterior. Since operation the child had put on flesh rapidly. Liquor pancreaticus had been administered, as in these cases the gland was functionless.

Mr. COTTERILL also showed a case of Spina Bifida, leading by a narrow bony aperture into the body of the sacrum, and a case of Actinomycosis of the Cheek.

Mr. CAIRD showed a male patient who had suffered from Discharge from the Ear for years. On the discharge ceasing, headache, fever, &c., developed. The mastoid was opened, with improvement for some days. Frontal headache, however, developed, which increased, and in twelve hours he had become incoherent, with high temperature, paresis of the upper part of the face, twitchings of the right side of the body, then of the left, and paralysis of the right side. Intra-cranial suppuration, rapidly developing in the cortex, was diagnosed. He was trephined over Broca's convolution, but nothing was found. The dura mater was opened and some fluid escaped, but nothing further could be discovered. He was put back to bed, and after the operation he developed all the symptoms of tuberculous meningitis with coma. After a time he improved and very gradually recovered. It seemed to be a case of tuberculous meningitis in which recovery had taken place.

Mr. CAIRD also showed a lad operated on for Dilatation of the Stomach with progressive emaciation. On opening the abdomen the pylorus was found to be constricted and the stomach and duodenum dilated. The pylorus was enlarged by a longitudinal incision converted into a transverse one. The greater curvature of the stomach was doubled up and stitched to the lesser curvature, and so the stomach was rendered smaller. Marked improvement took place, but it was still necessary to use the stomach tube.

Dr. JOHN THOMSON showed (1) a boy aged six and a half years, suffering from Deformity of the Hands and Fingers due to an Attack of Peripheral Neuritis following Measles; and (2) a girl aged fourteen years with Elephantiasis of the Neck, Scalp, and Face.

Mr. WALLACE showed a patient who had been operated on for Abscess of the Brain following Ear Disease. A large abscess in the temporo-sphenoidal lobe was evacuated and a drain left in. A good recovery was made, the only remaining symptom being slight amnesic aphasia.

Mr. ALEXIS THOMSON showed patients who had undergone Neurectomy for Trigeminal Neuralgia. The first patient, a man aged seventy-four years, had suffered from epileptiform attacks of neuralgia brought on by movement of the jaw. One and a half inches of the supra-orbital nerve were removed with relief. In a fortnight the neuralgia began again in the auricular branch, an inch of which was removed. He had now no pain and there was no deformity. In the second patient the Gasserian ganglion had been removed by Rose's method. There had been no pain since the operation, and the only disability was some stiffness of the jaw.

Dr. NORMAN WALKER showed four cases of Lichen Planus presenting the typical characteristics, and a case of Leucoderma.

Dr. MCKENZIE JOHNSTON showed Foreign Bodies from the Nose, Throat, and Ear, one of which, a button, had been removed from the nose after fifteen years' lodgment.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Uncommon Symptoms in Cases of Throat Disease.—Syringomyelia.

A MEETING of this section was held on Dec. 13th, 1895, Dr. THOMAS W. GRIMSHAW, President, being in the chair.

Mr. J. J. BURGESS described a case of extremely acute Tonsillitis in which frequent Hæmorrhage from the surface affected was the prominent symptom. This resisted all hæmostatic drugs, was independent of an abscess which was opened, and persisted for some days after the acute symptoms had disappeared, until, as he believes, exhaustion finally caused its cessation. He also gave particulars of a case of Spasm of the Larynx. The patient was a young man in apparent health, who, after he was suddenly seized with a choking fit, was believed by his parents to be dead. Artificial respiration partially restored him, but on some brandy being poured down his throat an intense spasm came on and apparent asphyxia; the symptoms were so sudden that death was believed to have taken place. After six hours' artificial respiration he rallied, the rash of measles followed, and the patient made a rapid recovery.—Dr. JAMES LITTLE said that very severe and anomalous symptoms sometimes occur when the exanthemata (scarlet fever and measles) are about to appear, and he had seen cases of this nature in which it was impossible to make a diagnosis until twenty-four hours or more had passed.—Dr. WHEELER believed that Mr. Burgess would find two cases similar to his mentioned in the *Medical Times and Gazette*. He was not sure of the date of the number containing the reports, but he believed it was one of the numbers of 1859 or 1860. As well as he could remember, one of the reports was by a Mr. Stanley.—Dr. J. W. MOORE said that Trousseau, in his Clinical Medicine, mentions a case where violent convulsions, extending over eight days, subsided on the first appearance of the rash of scarlet fever.—Dr. W. J. SMITH believed that the severe hæmorrhage in the first case was from the vertical arteries that run in the pharyngeal folds. Those vessels cannot contract as well as other arteries, hence the severity of the hæmorrhage. With respect to ergot as a remedy for internal hæmorrhage, except in the case of the uterus he considered the drug quite useless.—Dr. WOODS considered that in the first case a vessel had been opened by an ulcerative process. He was not sure that it must have been necessarily an artery. Venous bleeding, he thought, was a much more serious matter than arterial bleeding.—Mr. BURGESS, in reply to Dr. Woods, said that he arrived just after the occurrence of the hæmorrhage in the first case. He did not see the bleeding points, and his difficulty had he used styptics was where to apply them.

Dr. M. M'HUGH gave a brief account of the pathology and symptomatology of Syringomyelia. The term is now restricted to cavities produced in the cord by the liquefactive or cystic degeneration of a gliomatous neoplasm. The gliomatosis results from a proliferation of embryonic tissue remaining over in that part of the cord developmentally the weakest—viz., the posterior grey commissure and its vicinity. Schultze first pointed out the symptoms characteristic of the disease, and with an accumulated clinical experience it was now possible to diagnose cavities in the cord from the patient's symptoms with almost the same facility and accuracy as posterior sclerosis in a case of locomotor ataxy. The patient exhibited, a male aged twenty-five years and a native of County Mayo, presented the following symptoms—viz., trophic lesions in the hands, consisting in loss of the terminal phalanx of each middle finger, with the cicatricial remains of cutaneous fissures, and transversely corrugated nails, also remarkable thickening of certain phalanges (cheiromegaly of Charcot). Muscular atrophy of the ulnar type was also present, well-marked in the scapular muscles and the trapezius, which showed fibrillation; faradaic contractility was impaired; sensory dissociation—i.e., analgesia and thermo-anæsthesia—together with retention of tactile sensibility and the muscular sense was well-marked, with a wide symmetrical distribution. The patient also exhibited scoliosis, with convexity towards the right, and spastic symptoms in the lower extremities; there were very slight vaso-motor disturbances and no ataxia or ocular derangements or visceral troubles. Dr. M'Hugh referred to the trophic lesions in the hands, painless whitlows

with cheiromegaly, as similar to those found in Morvan's disease. The latter, however, was now considered to be only a type of syringomyelia, and the case exhibited was a true example of the disease, showing Morvan's symptom—sensory dissociation, the most remarkable feature of the disease, and one difficult to explain—Dr. CRAIG remarked that the symptoms of the case were most classical from the fact that they occurred in a patient from twenty to twenty-five years of age; that dissociation symptoms were so well marked: that muscular atrophy attacked the upper extremity, causing weakness; and that there was spastic paralysis of the lower limbs and curvature of the spine.—Dr. BOYD drew attention to the scoliosis which is so often a marked feature in atrophy of the muscles of the shoulders and back.—Dr. M'HUGH, in reply, said that the fact that the scoliosis was to the left and not to the right side was remarkable.

SECTION OF OBSTETRICS.

Solid Ovarian Tumour.—Ovariotomy at Sixty Years of Age.—Ovarian Tumour simulated by Misplaced and Rotated Spleen.—Exhibition of Specimens.

A meeting of this section was held on Dec. 20th, 1895, Dr. LOMBE ATTHILL, the President, being in the chair.

Dr. ALFRED SMITH read a paper on a Solid Ovarian Tumour. The patient was aged twenty-five years and was unmarried; her abdomen was so distended that she was unable to recline in bed and had to be supported in the semi-erect position by an arrangement of pillows. Abdominal palpation revealed an immense collection of free ascitic fluid, and no tumour could be made out, but on paracentesis being performed fourteen pints of thin, serous fluid were removed, and a tumour occupying the left inguinal and lumbar regions was then distinctly palpable, floating freely about the abdominal cavity. It was removed by coeliotomy. The patient's recovery was interrupted by a severe internal hæmorrhage thirty-six hours after operation, controlled by reopening the abdomen and securing the bleeding vessel. The blanched and pulseless condition of the patient required the use of saline solution as a peritoneal douche. This caused a marked and immediate improvement, and there had been no return of the ascites since the operation, seven weeks previously. The tumour was a myosarcoma as large as the adult head.

The Hon. Secretary read for Dr. KINKEAD a paper on a case of Ovariotomy, the patient being sixty years of age. The wound healed by first intention; the patient sat up in bed on the tenth day and was out of bed on the eighteenth day. The cyst contained 640 oz. of dark-brown fluid.

Mr. HENRY GRAY CROLY exhibited a large Multilocular Ovarian Tumour which he had removed from a girl aged sixteen years after it had been growing for about nine months. Menstruation had been irregular of late, and the "ovarian face" was very marked. The girl lost flesh considerably. The measurements were 38 in. in circumference at level of umbilicus, 30½ in. at ensiform cartilage, 8½ in. from umbilicus to right anterior superior spine, and 8¾ in. from ensiform cartilage to left anterior superior spine. The usual incision was made, and two gallons of gelatinous, greenish fluid were drawn off from a large cyst. There was no hæmorrhage. The girl was fed per rectum for several days; she made a rapid recovery and became fat.—Mr. CROLY also exhibited a Misplaced and Rotated Spleen which simulated an Ovarian Tumour and had been removed from a married woman aged forty years. She had had several children, but had never noticed any abnormal tumour until last summer. The swelling commenced at the left side and gradually extended towards the right, but was not painful. The patient lost flesh and her features changed. She thought at first she was pregnant. The medical man who had attended her previously had never observed any abdominal tumour until he was consulted after her last confinement. She aborted shortly after her admission to hospital. On palpation the tumour was firm and gave the sensation of fluctuation, and, though apparently larger on the left side, crossed well over to the right and could not be moved upwards or downwards. There was no history of ague, and the woman had never been out of her native place. The unanimous opinion was that the tumour was ovarian. Mr. Croly performed laparotomy and came down on a large, solid, fleshy mass, with purpuric mottling on the surface. The pedicle could not be found until the wound was extended above and to the left of the umbilicus, where a funis-like pedicle was discovered, which was secured by a double silk ligature. The patient went on most favourably for some days, when vomiting and collapse set in, and she succumbed. No post-mortem examination was obtained.—The PRESIDENT said that fifteen years ago he had diagnosed an ovarian tumour which proved to be a sarcoma. The patient was now married, and her only cause of regret was that she had no children.—Dr. MACAN said that his diagnosis of Mr. Croly's case was that the woman had been going about with a twisted spleen for many months, and that enlargement was due to the twist.

Dr. ALFRED SMITH showed an Abscess of the Ovary with Pyosalpinx, which he had removed from a patient who had suffered from a severe attack of puerperal fever twelve months previously; it burst during removal. The peritoneal cavity was protected by thin gauze sponges; the pelvis was douched out with gallons of saline solution, and there was rapid recovery.

Mr. HASTINGS TWEEDY exhibited a Dermoid Tumour of the Right Ovary, which he had removed from a patient aged forty-five years. It contained much hair and a portion of lower jaw, with many teeth embedded in it.

BEQUESTS AND DONATIONS TO HOSPITALS.—The corporation of London has made the following grants—namely, 100 guineas to the Westminster Hospital and 50 guineas to the Alexandra Hospital for Children with Hip Disease, Queen's-square, Bloomsbury. — The Merchant Taylors' Company has forwarded a donation of 50 guineas to the St. George's Hospital, London.—The Carpenters' Company has voted £70 to the London Hospital.—The Fishmongers' Company has granted a donation of £105 to the Poplar Hospital for Accidents.—The Hull Hospital Sunday Fund for the past year realised £784 3*s.* 8*d.*, which has been allocated, *inter alia*, as follows: £491 to the Hull Royal Infirmary, £80 to the Hull and Sculcoates Dispensary, and £132 to the Victoria Hospital for Sick Children.—The late Mr. Daniel Sheriff Jackson of Llandudno has bequeathed £5000 to the Mauldeth Hall Hospital for Incurables, Manchester.—Mrs. Hammand, widow of the late Mr. E. W. Hammand of Aldrington, has given £1250 to endow a bed, to be called the "Edward William Hammand" bed, in the south wing of the dispensary in the Sackville-road, Hove.—As the result of the recent exhibition in the Town-hall, Middlesborough, the North-Riding Infirmary and the North Ormesby Cottage Hospital have benefited to the extent of £300.—The following sums have been received by the treasurer of Guy's Hospital in response to the recent appeal for funds—namely, from Mr. A. Lilienfeld, £25; South Metropolitan Gas Company, £100; Mr. Jackson Hunt, £52 10*s.*; Mr. J. Wernher, £500; Anonymous, £210; and Mr. G. C. Raphael, £200. — The treasurer of Middlesex Hospital has received 3000 guineas from an anonymous donor as a perpetual endowment of one bed and two cots, in memory of his young wife.—The treasurer of the Keighley and District Hospital has received £340 from the Friendly Societies' Gala Committee as the result of their demonstrations, &c., on behalf of the institution during the past summer.—The late Mrs. Mary Ann J. Allcroft, widow of Mr. John D. Allcroft, treasurer of Christ's Hospital, London, has bequeathed £1000 to the Royal Hospital for Incurables, Putney.—Mr. Henry B. Peart, late of Brighton, has bequeathed £1000 each to the Hospital for Consumption, Brompton, the St. Mark's Hospital for Fistula, the National Hospital for the Paralysed and Epileptic, London, and the Sussex County Hospital.—Alderman G. B. Lloyd has given £500 in behalf of the building fund of the new General Hospital, Birmingham.—Mr. Councillor Edward White has contributed £500 to the Sussex County Hospital, £200 to the Hospital for Women in West-street, Brighton, £100 each to the Children's Hospital and the Brighton and Hove Dispensary, and £50 each to the Throat and Ear Hospital and the Eye Hospital Brighton.—Mr. James Laing of Thornhill, Sunderland, has given £500 in memory of his son, who died two years since, towards the furnishing account of the Heatherdene Convalescent Home, Harrogate, an adjunct of the Sunderland Infirmary.—The treasurer of Guy's Hospital has received from Mr. Cosmo Bonsor, M.P., deputy chairman of the South-Eastern Railway Company, £221 as the proceeds of a concert, all the expenses of which had been borne by the staff.

Reviews and Notices of Books.

An Anatomical Dissertation upon the Movement of the Heart and Blood in Animals, being a Statement of the Discovery of the Circulation of the Blood. By WILLIAM HARVEY, M.D. Privately reproduced in facsimile from the Original Edition printed at Franckfort-on-the-Maine in the year 1628, with a Translation and Memoir, for G. Moreton, 42, Burgate-street, Canterbury.

THIS handsome volume deserves to be studied by all who are interested in the story of England's greatest contribution to physiology. It contains a masterpiece of facsimile reproduction of typography, comprising everything that is in the original edition of Harvey's famous "Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus," from the engraved title-page to the concluding list of *errata*, for which the Frankfort printer apologised on the ground of "rei novitas & nostris correctoribus inusitata missi exemplaris litera peregrina." He, however, omitted reference to some of his *errata*, as, for instance, that on p. 7, line 3, where the medial letter *p* has dropped out of the word "philosophati." The method of reproduction is not mentioned; but it has, no doubt, been some photo-mechanical process. The result has been compared with a copy of the original edition in the library of the British Museum, and the practical identity of the printed surface in the two volumes is hardly attainable by any other means. The above-mentioned gap in the word "philosophati" is in the Museum copy filled by a letter of distinctly more slender outline than the others. In the new edition the two engravings of the arms bandaged for venesection have a pale-grey background, which does not exist in the original. The latter, moreover, was printed on paper of indifferent quality with narrow margins, but the new edition is on thick and fine paper with wide margins all round, top edge gilt, front and bottom edges rough, vellum back with cloth sides. When the original appeared in 1628 Harvey would be in his fiftieth or fifty-first year; the first English reprint of the Latin text was published in 1648, and the first English translation in 1653. Harvey died in 1657. The Exercitatio consists of only seventy-two pages (thirty-six leaves), including the title-page, but not including the list of errata, and is therefore among the smallest of the seventeenth-century treatises which have conspicuously extended the field of knowledge. The original work on Logarithms by Napier of Merchiston is comparable with it in this respect. Among other treatises of the same century, which, though in small compass, nevertheless enjoy permanent celebrity, that of Sir Isaac Newton on Fluxions was bound up with the first edition of his Opticks; and that of Descartes, in which the science of coördinate geometry was first unfolded, was published anonymously in 1637 in connexion with the "Discours de la Méthode pour bien conduire sa Raison."

The book has for its frontispiece a portrait of Harvey, and it also contains an excellent English translation of the "Exercitatio," being, with a few verbal emendations, the version by Dr. Robert Willis of Barnes, Surrey, by whom the whole of Harvey's works were translated for the Sydenham Society in 1847.

Physical and Natural Therapeutics. By GEORGES HAYEM, M.D., Professor of Clinical Medicine in the Faculty of Medicine, Paris; edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. Edinburgh and London: Young J. Pentland. 1895.

AS a sub-title explains, this is a work dealing with the remedial uses of atmospheric pressure, climate, heat and cold, hydro-therapeutic measures, mineral waters, and electricity. This is a comprehensive and not wholly homogeneous group of subjects, and we are not entirely convinced of the practical utility of treating them together. Climatology is in itself a very large subject, any cursory treatment of which cannot be of much value; balneology in like manner has become too extensive to handle conveniently as a mere section of a general work, and the therapeutic applications of electricity have become almost a new branch. On these grounds, therefore, we think Dr. Hayem has essayed a task of no ordinary difficulty, nor can we think that the execution of it has been quite successful. In the section on Climate we are informed that "Tasmania and New Zealand have been much extolled in recent years as climatic resorts. They are not of sufficient interest to warrant a detailed description. ..... New Zealand has a humid and wind-swept coast, and should be avoided by sufferers from pulmonary diseases." This is both superficial and inaccurate. The provinces of Napier and Canterbury in New Zealand afford some good resorts for phthisical patients. As regards Davos we are informed (p. 67) that "the air is quite humid, more so in the winter than the summer." Again, what are we to make out of the statement on p. 73 that "the dry and cold climates are so rarely employed in the treatment of disease that their considerations (*sic*) may be omitted"? In this section Dr. Hayem draws largely, with the most ample acknowledgments, upon the works of Weber, Williams, and Lindsay, but we imagine those writers will be somewhat surprised at the use sometimes made of their material. The section on Mineral Waters seems to be more carefully done, and is on the whole sound and accurate. The writer's estimate of the sphere and utility of mineral waters is moderate and judicious. The section on Electricity is full and comprehensive, and is perhaps the best part of the book. The writer has a high opinion of the practical applications of electricity, which he styles "one of the most remarkable of therapeutic agents." The following paragraph contains some of the more important of his views on this subject: "Central galvanisation is said to produce chiefly improvement in sleeping, increase of appetite and muscular force, reawakening of intelligence, and the disappearance of fatigue. An increase in the body-weight is not observed after this treatment, this being produced only by general faradisation. The indications for the general measures are numerous. They comprise, apart from the neuroses, those diseases that are associated with disorders of nutrition, and involve from their long duration a more or less intense wasting of the organism. It is conceded that in cases in which it is desired to act specially upon the central nervous system preference should be given to general galvanisation, and that general faradisation has a more marked action on the skin and the muscular masses, and that it is particularly adapted for producing a general tonic action." On the whole, this is a disappointing book.

Ireland: its Health-resorts and Watering-places. By D. EDGAR FLINN, F.R.C.S. Irel., D.P.H., Examiner in State Medicine and Public Health, Royal Colleges of Physicians and Surgeons' Conjoint Examining Board, Ireland. Second Edition. Dublin: Fannin and Co. London: Baillière, Tindall, and Co. 1895.

MANY writers, both in prose and verse, have celebrated the beauties of Irish scenery, and reminiscences of famous events are plentiful all over the country; but the throng of English tourists who make their way every year to the Rhenish watering-places, to Switzerland, and to the shores of the Mediterranean do not fully realise the excellent opportunities which await the summer visitor to Ireland. Fashion is, no doubt, accountable for some of this indifference, but other explanations of it are to be found in the superior attractions of gay Continental show places and the skill of their inhabitants in suiting various tastes

Mr. Flinn's book contains a wealth of information for those who desire relaxation and change of scene without encountering the drawbacks incidental to foreign travel. It is a valuable addition to our manuals of special topography, being profusely illustrated and introducing the reader to some ninety localities notable either for mildness of climate, charming scenery, or mineral springs. Sulphuretted springs occur at Lucan (nine miles from Dublin), at Lisdoonvarna (on the west coast, near Galway Bay), at Swanlinbar (county Cavan), and at Ballynahinch (seventeen miles from Belfast). Chalybeate springs are found at Lisdoonvarna, Castleconnell, Ballynahinch, and other places. The only warm spring in Ireland is at Mallow, in county Cork, the temperature of the water being from 70° to 72° F.

Nursing in a Nutshell: the Rearing and Management of Children from Infancy upwards. By a DOCTOR OF MEDICINE. London: Iliffe and Son. Price 6*d*.

THIS little work is described as a practical instructor for the use of parents and superior nurses, and is mainly applicable to children in ordinary health. It is excellently adapted to the end in view, but in the short chapter on the Eyes and Sight some warning might have been added as to the care of the sight during school-life, and readers are likely to be misled by the reiterated statements to the effect that "a successful vaccination affords as much protection against small-pox as an attack of that disease itself." This statement is rather equivocal; it would have been more to the point had the writer emphasised the value of re-vaccination after childhood, as ensuring a degree of protection even greater than that afforded by a previous attack of small-pox.

LIBRARY TABLE.

A Treatise on the Nervous Diseases of Children, for Physicians and Students. By B. SACHS, M.D., Professor of Mental and Nervous Diseases in the New York Polyclinic, &c. pp. 650. 160 Illustrations. London: Baillière, Tindall, and Cox. 1895.—Dr. Sachs presents us in this volume with a very full, clear, and well-illustrated account of a number of forms of nervous disease. From the title of the book we were led to expect that the description of the diseases would refer to the manifestations present in children. Liberal space, it is true, is given to affections such as chorea and the myopathies which are met with most frequently in juvenile subjects; but when we come to conditions such as epilepsy, which are met with at all ages, the description of the disease is much more suited to adult cases than to children. There is no attempt made to differentiate for the reader the picture presented by children suffering from particular complaints and that of adults in the same condition. Chapters are even given to paralysis agitans and tabes dorsalis. Hence the reader is constantly in confusion as to whether adults or children are referred to. A chapter on Mental Disorders is added, including a section on Idiocy and Imbecility. The book shows throughout that the author is a man of very wide and accurate neurological knowledge, and that his descriptions are based on personal observation and experience. It is much to be regretted that he did not prune the book more thoroughly before publication and keep rigidly to the subject he had chosen for the title. The language employed is clear and pleasant, and the book is profusely illustrated, chiefly from photographs of clinical cases.

Annales de l'Institut Pasteur. Vol. IX., No. 11. Paris: G. Masson, Nov. 1895.—This account of original work carried on in the Pasteur Institute comprises several papers of great interest. M. Marchoux has experimented further with the serum of blood taken from an animal that has been immunised against anthrax, and finds that the antidotal powers of the serum are greater if taken a short time after a fresh dose of a virulent anthrax culture has been given to the immunised animal. He finds that the best results are obtained if the serum is prepared two or three weeks after the last inoculation. M. Duclaux continues his researches on intra-cellular nutrition, based mainly on the behaviour of the ordinary organisms of fermentation in various media, and M. Grimbert deals with the changes produced by the growth of pure cultivations of Friedländer's pneumococcus in sugars, glycerine, &c. Contrary to what Frankland had supposed, he finds that it acts on glycerine, splitting it up into ethyl alcohol, acetic acid, and lactic acid.

The Care of the Baby: a Manual for Mothers and Nurses. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Philadelphia: W. B. Saunders. 1895. Price, $1.50.—Parents will find in this volume of 370 pages most copious information on every detail of nursery management. The opening chapter describes the precautions to be observed by the mother during the later months of pregnancy and gives elaborate directions as to the preparations to be made for the expected event, "ether, one half-pound," being among the articles to be provided for the occasion, although its use or application is nowhere alluded to. There are eleven chapters in all, the last of which, on the Sick Baby, is the largest, covering about 130 pages. It contains rather more than the average mother can be expected to assimilate, but the general directions as to domestic treatment until medical advice can be obtained are excellent, and the fulness of the symptomatology makes it worthy the attention of young practitioners. The book is written in an agreeable style and is copiously illustrated.

New Inventions.

A NEW VACCINATOR.

PRACTITIONERS who have to vaccinate a large number of patients in rapid succession will appreciate the utility of any instrument which Messrs. Mayer and Meltzer have made for me, and which I have found very effective in my capacity as a public vaccinator. It consists, as will be seen by the illustration, of a blunt-pointed lancet and needle in one instrument. The advantages of it are, firstly, that it is easily kept clean; secondly, that it can be used either as a

contrivance by which the operation is facilitated, and observation for an hour or two at a well-attended vaccination station will remove any doubts as to the saving of time and labour which may be effected by the adoption of a judicious system. For these reasons I forward a description of an scarifier or as a puncturer; and, thirdly, that the roughness of the handle enables one to use it more easily than an ordinary lancet. It is put up in a wooden case in which there are recesses for tubes.

T. GARRETT HORDER.

Cardiff.

THE LANCET.

LONDON: SATURDAY, JANUARY 11, 1896.

WE congratulate the members of the British Medical Association on the flourishing condition of their affairs as disclosed in the leading article which appeared in the *British Medical Journal* of Jan. 4th. We are willing to believe that (to quote the article in question) "its borders annually extend; its branches multiply; its interests become more varied." We can well believe this, for our own work during the past years has become steadily heavier as a consequence of the enormous output of energy in the profession, its daily annexation of new provinces, its hourly exercise of suzerainty over new realms. We can also well understand that the Association is constantly appealed to by individuals for the redress of grievances, for the members of the Association are numerous and the burdens borne by the overcrowded profession of to-day are neither light nor few. And in respect of these burdens we are glad to learn that appeals are seldom made without effect, for it is impossible to conceive the Association undertaking better work than the practical assistance of its members in times of trouble. THE LANCET Relief Fund, an account of whose administration during the year just gone, under the almonership of Sir RICHARD QUAIN, Sir J. RUSSELL REYNOLDS, Mr. CHRISTOPHER HEATH, and the Proprietors of THE LANCET, we published last week, represents our similar desire to alleviate, as far as lies in our power, the material ills of our professional brethren.

Thus far we go cheerfully with the *British Medical Journal*. So many members of the Association daily become our subscribers, so many are upon our editorial staff and among our personal friends, that the success of the Association could not be other than grateful to us, even if it did not benefit the profession at large to as full, generous, and scientific an extent as is frequently set out in the columns of its official organ. But to some of the sequel we take great exception. It appears from a paragraph that follows that "a recrudescence of the once popular vogue" of THE LANCET might "threaten the supremacy" of the *British Medical Journal*, and in support of the amiable suggestion that we are in a position to require recrudescence we find absolutely false statements with regard to our circulation. Now, this kind of thing belongs to the days of one Mr. POTT; it is a recrudescence of the editorial manners of the rival editors of Eatanswill, and it is not creditable to the great and rising position of the Association that such foolishness should appear in the columns of its journal. We should not have replied either to the insinuation or the false statements had it not been for the fact that so many of our friends, being members of the Association, may expect it of us: for our position is so well known to all whom it concerns that no necessity whatever exists for us to state it and shriek about it. That position is now exactly what it has ever been—the highest—and is due now to what it has been always due—honesty and thoroughness of purpose. As a result our circulation is the largest purely medical circulation in the world where the subscribers expect to get nothing whatever in return for their money save their paper, while our opinions are everywhere quoted because they are known to be duly weighed and sincerely held, and our high price does not enable our younger rivals to detach subscribers from us. But this we hope that they will continue to attempt, for healthy rivalry is good for all of us and must result in the giving to the profession the best that journalism can do. But they should make their attempt by legitimate methods; not by false insinuations or incorrect statements, but by producing a better paper than THE LANCET, one giving a more comprehensive review of matters of medical interest, and one more resolute to see that the medical man has justice everywhere, whatever his position or his plight.

NOTHING is more striking to the older members of the profession than the larger introduction of the trained nurse into the sick-room. In former days the advantage of nursing was practically the monopoly of the inmates of hospitals. In private families the nursing was done chiefly—and, let us remember with gratitude, was done often most effectively—by members of the family or by friends. Not unfrequently the monthly nurse was called in—perhaps to nurse a scarlet fever case. The system of domestic nursing still survives to a great extent among the middle and the lower middle classes of society, often to the great disadvantage of the patient and the still greater disadvantage of those who wait upon him night and day. The result too often is the illness of those who do nursing duty, or, if not illness, exhaustion and impairment of health arising from overwork. This is especially the case when relatives attempt the nursing of febrile diseases which require attention by night as well as by day. The reason why they break down so much more frequently than the trained nurse is obvious. The nurse has her fixed hours for rest, and she has a mind not wrought to a high pitch of anxiety and worry by personal affection. There is still a great deal of difficulty in regard to these classes in procuring consent to the sending for a nurse, excepting in infectious or urgent cases. This is due to two circumstances—firstly, the cost of the nurse; and, secondly, the prejudice against the introduction of a stranger who may be unsympathetic or even so exacting as to disturb the smooth working of the domestic arrangements of the house. In the choice of the medical man the patient or his relatives are guided by their knowledge or the knowledge of their friends, but in the choice of nurses there is rarely a chance

of such guidance, neither the medical man nor the patient knowing beforehand anything of the nurse who is to be sent. This disadvantage is soon overcome by some nurses who by tact and kindness, not only to the patient, but to friends, conciliate and disperse all differences and overcome all objections.

But there are others who have no such faculties: who tread on everybody's corns, from the youngest servant up to her mistress; who seem to think that nursing means the exaction of as much attention to themselves as the patient requires, the appropriation of the patient and the bedroom, and the exclusion from it of those whose affection and solicitude it is her duty to consider; and, finally, who assume airs and authority of a medical character. Medical practitioners are often hindered and annoyed by such qualities in nurses, and naturally would be glad to encourage any mode of selection or any element in the education of nurses which would tend to eliminate from their ranks those who are so defective in the personal qualities which are essential in one who is to be left in charge of patients by night, when all their natural protectors are asleep. There is a most essential difference, again, between the medical man and the nurse. He is practically associated in all his work with the friends of the patient. He rather likes and invites their presence. She is apt to consider friends rather as in the way, or as being so uninformed in the technique of nursing as to be unfit even to coöperate with her in those offices which are her peculiar care. Necessarily she is left for hours together, and generally for the whole of the night, with a patient presumably incapable of judging of the faithfulness with which she discharges her duties and at a great disadvantage for making any just complaint.

We readily recognise that such unfit and unfortunate nurses are the exception. But it is the part of those who are making kind efforts to supply the public with efficient nurses to consider whether there is anything in the training that explains such grave faults, or whether it is not possible to apply to probationers at the outset some tests of character and temper that would eliminate those whose presence in a household is a source of complaint rather than help. In the case of the true nurse it is amazing how soon she becomes a favourite and an influence in the home, so that there is a rivalry to serve and to please her. It is, of course, difficult to apply tests of character and temper in the same way that tests of knowledge and of nursing skill are applied. But when so much attention is being given to the provision of suitable nurses it is worth while to emphasise the enormous importance of these elements of fitness, and of their possession by probationers and candidates. We ourselves should attach much more importance to the part played by such qualities in extending the demand for nurses than to the long and exhaustive training which seems to be the leading idea of all nursing authorities at present. We have to overcome prejudice—the prejudice of the public, and the prejudice, in some degree, of the medical practitioner, who in a nurse wants not an equal but a subordinate—one to accept his diagnosis and to carry out his instructions, and one who, as Sir DYCE DUCKWORTH has said, should, above all, have perfect command of the tongue, and be able to check any tendency to recount all the wonderful cases she has seen. As to the length of training requisite, a period of three years is desirable in the case of nurses meant for high surgery or special work, and such nurses might have a special register as surgical or special nurses. Surgeons, with all their responsibilities in the matter of antisepsis, are entitled to the guarantee of nurses thoroughly trained; but it will be a mistake to make three years compulsory as a condition of registration for all nurses. Such a long curriculum is not necessary in nurses for the run of cases in general practice. If nurses are to be trained for the work of ordinary practice they must not be overtrained. Such overtraining will unfit them for the very work they have to do and for the very classes who are most in need of more nursing. The fees for nursing must be kept within limits, otherwise nurses will remain, as now, the monopoly of the rich and well-to-do. If these considerations are borne in mind in any scheme for the registration of nurses it will be of great service, especially if associated with an authority which shall exercise some function of guidance and discipline in regard to them.

ONE of the characteristics of the present age is the increased attention given to matters which with much hocus-pocus jargon are pronounced to be occult, a word admirably adapted to cover ignorance in a guise of enlightenment. What may be described as the occult fever has never reached a climax in this country, and has always been kept under by the exposures of fraud that have been made from time to time. In America, however, judging from the amount of literature which reaches us dealing with so-called occult matters, it would seem that that country is suffering from an epidemic of "faith-healing," "Christian science," and the various other sequelæ which follow on an attack of the occult. In view of the contagion spreading to England it may not be out of place to say a few words upon the subject. We are reminded of it by a letter from a correspondent, which appeared in THE LANCET of Dec. 7th, 1895, in which he records a case where nocturnal enuresis was cured by ideation; in other words, the patient was made to cure herself by being led to believe that the abnormal condition from which she was suffering was under the control of her own will. In the hands of the honest practitioner such methods of curing disease are perfectly legitimate, and perhaps a little more attention might be paid to the subject by medical men with profit. But there is another aspect of the matter. It must not be forgotten that in all probability if the nostrums and appliances used by the quack and the charlatan have the therapeutic effect which in some cases they seem to have, it is simply by the confidence which the quack inspires in his victims, coupled with the power of suggestion. In no other way can we explain the effects of nostrums and charms possessing no known therapeutic value.

That certain conditions of the body, natural or induced, can and do influence the mind—we use the term in its broadest sense and as connoting thought, feeling, and will—is well known. That certain conditions of the mind can and do influence the body is also well known, but in the light of

our present knowledge very little can be said about their *modus operandi*. Certain of the emotions, fear and expectation, for instance, have an influence on the body. A good example of this is given by Dr. T. LAUDER BRUNTON. A house physician, "Dr. H.," in the Royal Infirmary, Edinburgh, and a personal friend of his own, had a great dread of typhus fever, which was very prevalent in Edinburgh at the time when he was on duty at the hospital. He avoided going near cases of the disease as much as he possibly could, but one day he was asked to give his opinion upon a case of typhus fever by one of his fellow residents. The case, which presented some unusual symptoms, was in the ward devoted to typhus fever cases. "Dr. H." reluctantly went with his friend, but remained as far away from the case as he could. Unfortunately, however, he contracted the disease and died from it. Recent researches have shown that all depressing influences tend to lessen the resistance of a living organism to the invasion of microbes, and in all probability the effect of fear lessened the resistance in "Dr. H.'s" case and rendered him more liable to an attack of the disease than he would otherwise have been. Again, we know of a case where expectation, or, rather, the lack of it, may have been the cause of a negative result which in other circumstances would no doubt have been positive. At the afternoon tea of some medical men in an asylum syrupus rhamni catharticæ was surreptitiously substituted for preserve, of which one of them partook freely. As far as was observed, however, by the perpetrators of the questionable joke no purgative effect followed. It would not be difficult to multiply such simple instances of the power of the emotions over the body, closely allied as they are to methods in daily use by the medical man. Apart from the effects which fresh air and sunshine possess we all acknowledge the benefits which result from a change of scene or occupation, effects which are brought about by directing the mind from morbid and unhealthy channels into healthy ones. To digress for a moment it is not too much to say that music, literature, and the fine arts owe their educative effects to analogous principles.

It will thus be seen that ideation as a therapeutic agent is no new thing, nor is it unknown to the practitioner who uses it in a perfectly honest way. The charlatan and the quack, however, who are aware of its power and use, surround it with a glamour of mystery to charm and attract, as well as feed the credulity of their victims. Under these circumstances such cases as that given by our correspondent are well worthy of record and will help to expose the nefarious practice of the quack. At the same time the subject should be approached with caution, not to say scepticism, and we should remember the words of BACON when he says: "The relations touching the force of imagination and the secret instincts of nature are so uncertain as they require a great deal of examination ere we conclude upon them."

Two important resolutions were carried at the meeting of the Fellows of the Royal College of Surgeons of England on Thursday, Jan. 2nd, and each was of a character calculated to make the reactionaries of old turn in their graves. It is known that for some time past not the Members only but the Fellows also have considered it desirable that the government of the College should be less of an oligarchy than it is at present; and at the annual meeting of Fellows and Members held on Dec. 7th, 1895, the following resolution was carried:—"That the number of the Council be increased to thirty two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council." At the meeting of Fellows held on Jan. 2nd, 1896, this resolution was discussed, it having been referred by the Council to the said meeting. After some discussion the resolution was withdrawn and the following amendment moved by Mr. H. W. PAGE (originally moved in a more detailed form) was carried by a large majority: "That it is desirable to give the Members of the College direct representation upon the Council." *Parturiunt montes*—perhaps the average Member will exclaim—but, after all, the "*mus*" is not so "*ridiculus*" as would appear at first sight. The mere fact of a meeting of Fellows having agreed as to the desirability of Members being directly represented on the Council is an enormous step in advance, and a step taken in just the direction we have always advocated. The question whether the representatives shall be Members only or Fellows elected solely by Members may well, we think, be left under consideration for the present, it being sufficient that the principle of the direct representation of Members has been accepted by the Fellows.

We have urged upon several previous occasions the necessity for Fellows and Members to continue the struggle. The reforms of 1884 and 1888 have never been confirmed by Charter, but rest solely upon the will and pleasure of the Council, and inasmuch as this is the body whose exclusive privileges these very reforms seek to lessen, they are on a somewhat precarious foundation. The only speaker who definitely opposed any change at the meeting of Jan. 2nd was Mr. HENRY MORRIS, who among other arguments stated that the Council always had been self-elective, that at no time in the history of the College had the general body had any share in the government of the College, that no claim existed in law under which the Members could ask more than they at present enjoyed, and that election by the Members would be inexpedient, as the machinery thereof would cost £300 or more—a sum which the College could not afford. The first statement is not quite correct, as all know who have studied the evolution of the College from a craft to a Royal corporation. The difficulty about the cost of an election by the Members is most distinctly a point over which thought must be taken. As for the law—well, it goes to alter. A great stride forwards in the cause of reform has been taken, and all that is now necessary is pertinacity. The essential for success in these matters is perseverance, maintenance of position already gained, and a steady struggle forwards, even if there appear to be no actual advance. The government of the College still contains supporters of the old abuses, and there must be no relaxation of effort.

The second resolution passed by the Fellows at their recent meeting was to favour the admission of women to the diplomas of the College. With regard to this departure

there is much to be said, but the most obvious comment to make at this moment is that women have reached the position shown by the resolution by a remarkable exhibition of the very pertinacity we have advocated above.

Annotations.

"Ne quid nimis."

A CLOUDED SKY.

THE year 1896 has opened with war-clouds and political difficulties all around—east, west, north, and south—and the most remarkable feature in the present condition of affairs is that they are generally of the most unpleasantly unexpected nature. Most people in this country knew nothing and cared nothing about Venezuela, and they were fully impressed with the belief that the most amicable feeling existed between the people of the United States and themselves—indeed, we should have said that, as far as the English are concerned, Americans were very popular; but the Venezuelan lid is lifted, and discloses a state of feeling on the other side of the Atlantic of which the vast majority of the people on this side had not the remotest idea. Then comes, to add to the public perplexity, the unhappy Transvaal surprise, which is still inexplicable to many people, and likely to remain so until we get a fuller knowledge of all the circumstances attending it. Dr. Jameson's past career gave him the reputation of being an able, clear-headed, and astute as well as a brave Scotchman. With him were also allied in his unfortunate and apparently unwarrantable enterprise a number of intelligent, responsible officers and others. The very natural impression, therefore, is that Dr. Jameson has somehow been altogether misled, if not betrayed. That he started in hot haste to avert what seemed to him a very grave and emergent danger at Johannesburg, where he thought he would be joined by a large force, seems undoubted. Until all the antecedent and attendant circumstances are known, however, it is impossible to pronounce any just and honest verdict. That the expedition was a remarkable one and characterised by the greatest audacity and gallantry is undoubted. The altogether disproportionate number of killed and wounded on the side of Dr. Jameson's force, even under the very exceptional circumstances of the case, is one striking feature, and another is the large proportion of the killed to wounded in his force. The fighting took place on Jan. 1st, and continued till night, and on the afternoon of the 2nd Jameson's force—worn out with fatigue, half famished, and without ammunition—surrendered. How many of the wounded perished during the night with little or no medical aid we do not yet know. Nor did this unexpected series of events end here, for the course taken by the German Emperor and his seemingly precipitate and ostentatious intervention in the Transvaal episode constituted another great public surprise. With these matters, in addition to the condition of Turkey and Armenia and the Ashanti expedition, the various departments of the State have been pretty fully occupied of late, and the new Commander-in-Chief and War Minister have also had something to claim their attention. One thing seems clear at the present time—namely, that the naval and military forces of this country promise to absorb any surplus in the hands of the Chancellor of the Exchequer, and the hopes of a diminished income-tax will be dissipated by all these war alarms.

"THE LANCET" RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue, and can be readily detached should occasion arise for its use. We again take the opportunity of asking those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to carefully note the conditions on which applicants become entitled to a participation in the benefits of the Fund. All applications should be made to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London.

THE SEARCHLIGHT OF PHOTOGRAPHY.

EVERYONE remembers what Mr. Samuel Weller said in reply to the question put by Serjeant Buzfuz, "Have you a pair of eyes, Mr. Weller?"—"Yes, I have a pair of eyes," replied Sam, "and that's just it. If they wos a pair o' patent double million magnifyin' glass microscopes of hextra power, p'raps I might be able to see through a flight o' stairs and a deal door, but, bein' only eyes, you see, my wision's limited." In Sam Weller's day it is safe to assert that such an instrument was not available, and many will be sceptical even in these enlightened days as to whether it is possible to see or to bring to view an object which is situated behind a deal door. Yet this has virtually been accomplished, if we are to believe an announcement from Vienna this week. Thus, it is reported that Professor Röntgen, the professor of physics at Würzburg University, has discovered that a certain kind of light, while it will penetrate wood and the flesh of men and animals, will not penetrate bones and metals. The special kind of light which appears to be endowed with this remarkable differentiating property is obtained by passing an electric spark through a vacuum tube. As far as we can gather, a photograph may be obtained of metals enclosed in wood, or of the bones of a man's hand, by simply interposing these objects between the luminous vacuum tube and sensitised paper. If this be so, then, bones and metals being impervious to this light, a print will be produced which will represent the object in white, and the wooden or fleshy covering, as the case may be, as a sharp dark border in strong relief. Such results, we learn, have actually been obtained, both with metals enclosed in wooden boxes and with the bones of a living hand. In how many ways such a discovery might, if it be true, be turned to the highest account we cannot at this juncture pretend to say. For us it must possess the greatest possible interest, even though it contain only the shadow of a promise of affording a means, to quote one instance, of finding the locality of a bullet embedded in the flesh without causing the pain necessarily inflicted by probing for its whereabouts. At any rate, whether these applications are practically impossible or not, we have evidently advanced since Mr. Samuel Weller's time, since it is announced that means have been found for bringing objects enclosed in wooden cases to view, and that to all intents and purposes amounts to "seeing through a deal door."

"CRUELTY TO RAILWAY PASSENGERS."

UNDER the above heading a series of letters has lately appeared in our contemporary, the *Times*, on a subject in which THE LANCET has always taken the greatest interest. In 1862, the year in which the late lamented founder of THE LANCET, Mr. Thomas Wakley, rested from his earthly labours, we held an exhaustive inquiry into the influence of railway travelling on public health, and from time to time, as occasion has arisen, we have directed attention to the inconveniences and evils borne by the too patient railway traveller. Much has been done since those early days of railway travelling, when we published our Commission, but many things remain in almost the same primeval state as then, and the indignation of the public which is shown by its letters to the daily press seems to be totally ignored by the companies. One of the evils of which

complaint is made refers to the antiquated footwarmers, and their lack or uselessness is a constant complaint of passengers during the winter months. Quite recently a case came under our notice where on one of the southern lines a footwarmer was supplied which flooded the carriage with water in consequence of a leakage. A *douceur* to a porter soon procured the exchange of the footwarmer, but the heat from the other warmers in the carriage caused the water on the floor to evaporate and fill the compartment with vapour. In addition to this the traveller was subjected to the inconvenience and danger of a draughty carriage—a characteristic of the carriages on lines south of the Thames—and was probably only saved from the effects of a serious chill by precautionary measures on arrival home. The lighting of our carriages, too, stands in urgent need of reform, as do also their ventilation and proper cleansing. These do not by any means constitute the whole of the grievances complained of by the railway traveller, but they are the things which obtrude themselves most on his notice, and to which he from time to time calls attention by a letter to the daily press. If the whole of the travelling public would unite in protesting against their treatment by the railway companies good results would immediately follow. The apathy of the British public towards that which immediately concerns itself is proverbial; nearly the whole of its woes result from its indifference as a body, and while its outbursts of indignation are spasmodic and isolated the companies are not very likely to mend their ways.

ENTERIC FEVER AT ST. PETER'S HOME, MAYBURY, WOKING.

IN the summer of 1895 a somewhat remarkable outbreak of enteric fever occurred at this institution, and Mr. Wellington Lake, the medical officer of health of the district, has issued an interesting report upon it. The institution has for its object the treatment of respectable sick women suffering from non-infectious illnesses which require skilled nursing, and its population, all female, consisted at the time of the outbreak of 26 of the staff and 80 patients. The main portion of the building, the Old Block, was erected in 1885, and the New Block, with which all the cases appear to have been connected, in 1892. From the date of its opening the home had been free from enteric fever, but between June 4th and Aug. 2nd (fifty-nine days) there were 10 patients attacked in the home and 2 who developed the disease immediately after leaving; there was 1 fatal case. A careful examination into the possible causes of the outbreak led to the elimination of water, milk, and other foods, the main factor which seems to have been potent for harm being defective drainage, while personal infection is held responsible in one case. The water-closets and slop-sinks in the invaded block were, it appears, liable to anti-syphonage, while the ventilation pipes were defective in their joints. After the drainage system had been cut off, the attacks, save those already incubating and one due to personal infection, ceased. From these facts Mr. Lake considers that the defective drainage was responsible for the outbreak, and on further inquiry it was elicited that on March 9th and 13th respectively—i.e., nearly three months before the notification of the first case—nurses, convalescent from enteric fever, but certified as free from infection, were admitted into the home. It is supposed that one or other, or both, of these were instrumental in specifically infecting the drains, and that the infected sewer air subsequently found its way through means of the defects referred to into the new block. If this be so, the outbreak brings out two interesting points—i.e., the conveyance of enteric fever by sewer air in spite of the somewhat negative results of recent bacteriological experiments in this direction, and the long period which elapsed between the infection of the drain and the notification of the first case. It also raises an interesting point in reference to the persistence of infection in the excreta of patients convalescent from enteric fever. We must confess that the perusal of this interesting report has raised a question in our minds as to whether personal infection may not have been a more potent factor in the outbreak than it is accredited with in the report, but we expect there are numerous reasons against this view. We note, however, that there has apparently been an exceptional incidence of the disease upon the staff (7 attacks amongst 26 persons) as compared with the incidence upon the patients (5 attacks among 80), a fact which would seem, perhaps, to indicate that those who have been in an exceptional degree brought into contact with infected excreta and articles suffered most severely. This marked incidence, however, may be due to the staff having formed a large proportion of the population of the new block. We notice, also, that in two instances nurses in attendance upon the sick were themselves attacked. Under any circumstances the outbreak is instructive in having occurred in an institution of comparatively recent construction, situated in a favourable position, and supplied with a pure water. The defective drainage, however, shows the necessity for skilled inspection even in institutions such as these.

"PHYSICIANS AND THE CONFIDENCES OF THEIR PATIENTS."

UNDER the above heading the *New York Medical Record* says that the Circuit Court of Michigan has recently decided that a physician is obliged to testify in regard to the ailments of his patients in a court if compelled to do so. This old question arose, in this particular case, in connexion with a lawsuit by an insurance company against an insured person for a misrepresentation as to his physical condition. Our contemporary seems surprised at the decision of the Michigan court, but, surely, it is in accordance with both law and justice. A medical man may not be bound to go out of his way to expose the falseness of a patient, but he is not absolved from the liability to give evidence in a court of law on the point, and he is under, at least, the ordinary obligation of all men to speak the truth. Glenn, in his "Manual of the Laws affecting Medical Men," page 282, says: "It was decided nearly a hundred years ago that a medical man has no privilege to avoid giving in evidence any statement made to him by a patient, but that he is bound to disclose, when called upon so to do, every communication, however private and confidential, which has been made to him while attending in his professional character." It is a different thing to decline on behalf of a patient to give evidence, from professional knowledge, of his condition, say to an insurance office. The insurance office cannot compel such evidence. It can put its own construction on the refusal to give it, and it can apply any other medical tests it likes to a person's condition applying for insurance. But there is no claim to the report of the patient's private adviser, unless with the patient's consent.

GIPSIES' TENT LIFE.

A REMARKABLE story was told at an inquest at Portsmouth on Jan. 1st. A child had been overlaid, and the coroner's inquiry elicited the fact that a family of eleven persons lived in a tent in a brickfield. The tent was 16 ft. by 12 ft. The father and mother and the infant occupied one-third; a daughter aged nineteen, who had an infant eight months old and said she had never been to school, took up another part, together with seven brothers and sisters. There was a coke and coal fire in the middle, the smoke going out of a hole in the

top. The girl said she was present when the child was born, but "the children were turned out." She said there was no curtain, but the father said the place was partitioned off into "two bedrooms and a kitchen in the middle." The inhabitants, it should be added, slept on mattresses on the floor. A medical man who had visited the tent said it was fairly ventilated, and that the overcrowding had nothing to do with the death.

TRAUMATIC CEPHALHYDROCELE.

IN the *Edinburgh Hospital Reports* of last year Mr. Hogarth Pringle has a paper in which he gives an account of two cases of this somewhat unusual condition. The first was that of a man aged twenty at the time of his admission to the Edinburgh Royal Infirmary under the care of Mr. Annandale. The history was that at the age of sixteen months the patient had fallen down an area a distance of fourteen feet. He was unconscious when picked up, and blood was oozing from both ears and from his nose. There was a large swelling over the left side of the head, but no scalp wound. For a long time after the accident the patient was dull and stupid, but always able to recognise his parents. About three months after the accident he had his first fit. In this he was said to have lost consciousness, but not to have been convulsed. Fits recurred at varying intervals, and were then accompanied by convulsive movements of the limbs which were stated to begin in the left hand and to be followed by loss of power on the left side. The parents could not say how long after the accident pulsation was noticed over the seat of the swelling which succeeded the fall. On admission he was found to be well developed and fairly proportioned, but the left side of the body was not so well developed as the right. Mentally he was distinctly deficient. He was able to read and write and could understand what was said to him, but he was slow of comprehension. The knee-jerks were exaggerated, but no foot-clonus was present. The ocular fundi were normal. On the left side of the skull was a pulsating tumour with a "gutter" running downwards and backwards for two and a half inches. No unusual or significant sensation was produced by pressure over this swelling. The parents being anxious that an operation should be performed in the hope of improvement, Mr. Annandale dissected back a skin flap and found a lax-walled cyst over the upper area of the depression. This was opened, and a large quantity of clear, yellowish fluid escaped. An aperture was found in the skull large enough to admit the little finger. The patient was much collapsed after the operation, and at night peculiar movements of the limbs on the left side set in. He never regained consciousness and died early the following morning. At the necropsy the dura mater was found to be firmly adherent round the margin of the opening in the skull. There was an opening at the junction of the parietal, occipital, and temporo-sphenoidal lobes through the brain substance at a point corresponding to the opening in the skull. This led into the left lateral ventricle, which was considerably dilated. There was some blood in the middle fossa of the skull, the convolutions of the left side were not so well developed as those of the right, and the cerebral tissue was sclerosed. No explanation was found in the condition of the brain after death to account for the left-sided weakness and convulsions which were present during life. The second case was that of a female child aged four years who at the age of one year had also had a fall down a stair. When found she was unconscious and had a swelling above and in front of the right auricle. There was no bleeding. Three months later the swelling was incised, but only dark blood came away, and for a few months it remained absent. After that, however, it gradually returned, and at the time at which she came under observation there was a smooth, oval swelling 2 in. long by 1¼ in. broad. There was feeble pulsation which ceased with pressure over the carotids. There were no fits and no apparent mental impairment. A hypodermic needle was introduced into the swelling and a syringeful of clear, yellow fluid withdrawn. This fluid was found to reduce Fehling's solution and was considered to be cerebro-spinal fluid. There was no change in the swelling at first, but when the patient was seen a year after the puncture it was much smaller, without pulsation, and there seemed to be at one point a small opening in the bone. Mr. Pringle gives a short account of the different views held as to this condition, and is himself of opinion that the opening in the skull depends upon the absorption of the bone devitalised at the time of the accident. The actual injury appears to be a simple fracture of the skull occurring in early life and attended with laceration of the dura mater and probably wounding of the brain. The condition, as we have said, is by no means common, and Mr. Pringle is fortunate in having observed two such interesting cases.

THE MIGRATION OF CHRIST'S HOSPITAL.

AFTER a silence of some months as to the plans of the managers of Christ's Hospital, who long ago decided to move the institution bodily to Stammerham, near Horsham, active preparations for the change have recently been in progress. The plans of the buildings are approaching completion, and the Horsham urban council has promised to give the management every assistance in the matter of sewage disposal, proposed to be included in the council's works. Three directors of the London, Brighton, and South-Coast Railway Company, with the chief engineer, general manager, goods manager, traffic superintendent, and other officials, together with several of the governors of Christ's Hospital, have visited the site of the new buildings in order to locate the station which it is proposed to erect for the convenience of the establishment. It is supposed that the station will be placed in the fork formed by the junction of the Guildford branch and the main line of the railway, with platforms for both branches, but nothing definite is as yet known on the point. The work is to be commenced early this year and to be completed within six months.

TREATMENT OF PNEUMONIA.

THE treatment of pneumonia by the local application of cold is now recognised and adopted by many physicians. The writings of Dr. Mays of Philadelphia on this subject are well known. In the *Medical News* of Philadelphia of June 24th, 1894, he presented a collection of fifty cases of acute pneumonia treated in this way, and then extended a general invitation to the profession for reports of cases of pneumonia treated by the local application of cold. He received 145 additional reports, making a total of 195 cases. In the *Times and Register*, Philadelphia, of Dec. 7th, 1894, he published a summary of these cases. Without paying attention to statistics of sex, age, range of temperature, &c., we pass to the mortality and to Dr. Mays' comments thereon. Among the 195 cases there were 7 deaths—4 males and 3 females—or a mortality of only 3·58 per cent. The oldest of these was seventy-four, and the youngest was sixteen years. Three were cases of double and four of single pneumonia. Dr. Mays remarks that, whatever opinion we may hold in regard to the value of any treatment, it is quite obvious that in the long run the verdict will favour that one which shows the smallest mortality rate; the other details, the reports of numerous observers, give the

THE LANCET RELIEF FUND.

For Members of the Medical Profession and their Widows and Orphans when in Distress.

——:o:——

ALMONERS.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.

THOMAS WAKLEY, F.R.C.S. Eng.

THOMAS WAKLEY, Jun., L.R.C.P. Lond.

HON. AUDITOR.

SIR HENRY PITMAN, M.D. Camb., F.R.C.P.

——:o:——

THIS FUND will be provided year by year in the month of January to the amount of at least £300 solely by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to Medical Men, or their Widows and Orphans, *in cases of Distress and Emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

Applicants must satisfy the Almoners of the Fund that they are qualified under the following regulation:—

* "The recipients shall be such persons as satisfy the Almoners that they possess one or other of the following qualifications—that is to say: (*a*) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (*b*) That they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief."

To ensure the utmost despatch, the "Application Form" upon the other side should be filled up and forwarded (in an envelope superscribed "THE LANCET Relief Fund") to the Secretary, Mr. EDWARD DAVIES, THE LANCET Offices, Strand, London, W.C.

The application should be accompanied by two separate testimonials, one from the Clergyman of the Parish or other resident Minister of religion, and one from a registered Medical Practitioner, stating—that the application addressed to the Almoners has been read, how long they have known the applicant, and that they believe the statement to be perfectly truthful, and such as may be acted upon without further inquiry.

Private and Confidential. *No.* .....

APPLICATION FORM.

To the Almoners of the Lancet Relief Fund.

The applicant should here state shortly:—

1. The nature of the emergency that has arisen.

2. The circumstances out of which it has arisen.

3. The amount of the grant desired, and whether by way of loan (free of interest) or of gift.

4. If by way of loan, state when the loan will be repaid; and from what source the funds to repay it are expected to be forthcoming.

5. Whether the applicant is entitled or able in the circumstances which have arisen to look to any other source of assistance; and if so, what is the expected nature and extent of such assistance.

6. Whether the applicant is receiving, or has received during the past six months, pecuniary aid from any Medical Charity.

7. State how the applicant is qualified to receive assistance; vide regulation* on first page.

8. Particulars of:

Applicant's age

Number in family

How many are self-supporting

How many are partially dependent

How many wholly dependent

Applicant's Signature

Address

Date

*No.*_____

THE LANCET RELIEF FUND.

Name _____

Address _____

_____

Received _____

Considered _____

Resul _____

Date _____

mortality from pneumonia under various methods of treatment, which varied from 30 per cent. to nothing. What conclusions, he asks, are we to draw from such a varying death-rate? Are we to believe that all patients suffering from pneumonica recover under certain methods of treatment, and that a large proportion of them will necessarily die under others? No one would be justified in making quite such a reckless assertion, yet it must be admitted that the truth lies somewhere between these two extremes. It is a natural question to ask what proportion get well under no treatment whatever, and what proportion die under such circumstances. In 1844, 1845, and 1846 Dr. Dietl, a Viennese physician, treated 189 cases of pneumonia practically without medicine, with a death-rate of 7·4 per cent. From 1847 to 1850 he treated a second series of 750 cases, with a death rate of 9·2 per cent. Dr. Mays quotes also from homœopathic hospitals, regarding the treatment there adopted as equivalent to the "let-alone or do-nothing treatment." The mortality in these institutions varied from 7·3 to 12·55 per cent.; if these figures are reliable—and there is no evidence that they are not—they show that, as a rule, the natural tendency to recovery in pneumonia is about 90 per cent. But these figures would only seem to apply to an ordinary aggregate of favourable or unfavourable cases of pneumonia, and not to exceptional instances like those which are met with in fatal epidemics of pneumonia, or in a large number of successive cases of alcoholic, senile, or latent pneumonia. Dr. Mays compares the results of the ice-cold treatment of pneumonia with those which have been obtained from other forms of treatment, and maintains that the former are infinitely more satisfactory than the latter, for cold, he says, has a marked and decided influence on the pneumonic process, not only in bringing it to a favourable termination, but in materially shortening its course. He summarises the action of cold in comparing the chief dangers from pneumonia thus: "First of all it reduces the pyrexia, strengthens the pulse, tones up the heart, diminishes the pain in the chest, alleviates difficulty of breathing, and gives greater comfort to the patient. ..... In virtue of its power to stimulate nerve functions and to contract small bloodvessels it promotes the pulmonary circulation, relieves stasis, hastens resolution, and disperses the products of exudation."

"A BEAUTIFUL WORLD."

CONSIDERING the rapid progress which has been made in recent years in public education by university extension and schools of art, it is surprising that the public should tolerate the hideous forms and gaudy daubs of colour which disfigure earth, sea, and sky, and must offend the eye of all but those in whom the lowest development of artistic sense is absent. From an artistic point of view much might be said against the practice of the modern advertiser, but we leave this aspect of the subject to those whom it more immediately concerns. From the point of view of public health we protest strongly against the desecration of beauty and the fostering of ugliness in this manner. It is not enough that the man in health should have his worries added to during the day by having to puzzle out on the railway line by which he has been travelling the name of the station of his destination, in rather small type and hidden among a mass of letterings apprising him of the fact that Somebody's Sale is now on or that his children will never thrive unless they are surfeited on Somebody's Food; but on his arrival at the station of his suburban home after the day's toil he is informed by some specious advertisement that he will probably not live another day, or if he does that he will be in great danger of losing his mental balance, unless he forthwith purchases a bottle of Viper's Vicarious Vitaliser, or some other nostrum whose alliterative title itself is calculated to bring about the ills it is supposed to cure. It is not to the healthy, however, that the most harm is done; it is to the convalescent or the wearied who leaves town for rest and quiet to recoup jaded energies and restore exhausted nature. He arrives at some erstwhile quiet watering-place, hoping to forget the city which he has left; but, alas, he has scarcely alighted on the platform ere a flaming poster informs him that "*Puff's Pickles* are Paramount," and forthwith thoughts are carried back to the town life and all its perplexities and worries. Arriving at the sea front, the traveller ensconces himself under the shadow of the cliffs, and, lulled by the gentle murmuring of the waves as they ripple on the shore, watches the pretty yacht as it nears the land and he falls into a reverie. From this peaceful state, however, he is rudely awakened, for the white sails of the vessel which he has been likening to the wings of a bird, or other poetic fancy, prove to be but the medium of the ruthless advertiser, and the mind of the weak receives a rude shock when he learns that the whole of his ills have been caused by his omission to invest in a box of pills whose worth is fabulous. The picture we have given is not an exaggerated one; the evil is serious, and the damage done to the health of the convalescent under such circumstances is difficult to estimate. We, therefore, welcome "A Beautiful World," under which title the National Society for Checking the Abuses of Public Advertising issues its official organ.

HEMIPLEGIA AS A RESULT OF GONORRHŒA.

IN a recent number of the *Neurologisches Centralblatt* Dr. Ludwig Bruns of Hanover relates a case of somewhat unusual character. He remarks that gonorrhœa has as occasional complications serious affections of the nervous system only recently recognised. Fournier has described gonorrhœal sciatica, Hayem and Parmentier, Chavier and Tevrieran, Spillmann and Haushalter, and Leyden (and Gowers in this country might have been mentioned) have published cases of myelitis apparently closely connected with gonorrhœa. Engel-Reimers has also described cases of gonorrhœal polyneuritis as well as a case of meningitis. Tambourer has described a case of double hemiplegia following phlebitis occurring in the course of gonorrhœa, and Pitres mentions two similar cases of hemiplegia also occurring in the course of the same disease. Dr. Bruns's case was that of a young woman aged twenty who immediately after her marriage became infected with gonorrhœa, which, in spite of treatment, caused perimetritis and salpingitis. Soon after this, and without any warning, she was suddenly attacked with convulsions in the right side of the face and tongue and in the right upper limb, especially the hand. The leg at this time was apparently not affected. These attacks were repeated, and during the attacks and for a little time after them there was aphasia. There was paresis of the right face and of the right arm, and the right leg later became similarly affected, so that when she was seen by Dr. Bruns there were right-sided hemiplegia, complete motor aphasia, and slight blunting of sensibility. There was no headache or vomiting, and the ocular fundi were normal. There was no hemianopsia, the heart was sound, and there was no sugar or albumin in the urine. After this there was gradual improvement, especially in regard to speech, but the motor affection of the limbs still remained distinct and considerable. Dr. Bruns concludes that, looking at the history of the sudden onset, accompanied by epileptiform attacks, the condition determining the hemiplegia was an embolic one, and that the embolism had its origin at the focus of gonorrhœal inflammation in the Fallopian tube. But it is difficult to see how this could happen. An embolus breaking off from an inflammatory focus in the region of the Fallopian tubes would naturally have to traverse the

pulmonary capillaries before it could reach the brain. This, of course, is impossible, and if such an embolus had travelled to the heart in the large veins there might have been a pulmonary apoplexy. But how such an embolus could get to the brain we fail to see, and it seems more feasible to ascribe the hemiplegia to thrombosis occurring in cortical vessels, the thrombosis being probably determined by the morbid blood state to which the gonorrhœal inflammation had given rise.

THE PLACE OF RESEARCH IN EDUCATION.

Science Progress for January contains an interesting address delivered at a metropolitan polytechnic by Mr. H. E. Armstrong. He points out how fast we are losing our commercial prosperity because we will not, whether we make butter or cheese or leather or anything else, study scientifically the factors which go to ensure success. Concerning our present methods of education he says (and we only wish he would reprint this portion of his article and send it to the School Board) :—

English boys and girls at the present day are the victims of excessive lesson learning, and are also falling a prey, in increasing numbers year by year, to the examination-demon which threatens to become by far the most ruthless monster the world has ever known either in fact or in fable. Ask any teacher who has to do with students fresh from school his opinion of them : he will say that in the great majority of cases they have little if any power of helping themselves, little desire to learn about things, little if any observing power, little desire to reason on what they see or are called on to witness ; that they are destitute of the sense of accuracy, and satisfied with any performance, however slovenly ; that, in short, they are neither inquisitive nor acquisitive, and as they too often are idle as well the opportunities offered to them are blindly sacrificed. ..... Boys and girls at school must be taught from the very earliest moment to *do* and to *appreciate*. It is of no use our teaching them merely *about* things, however interesting—no facts must be taught *without their use* being taught simultaneously ; and, as far as possible, they must be led to discover the facts for themselves.

These are admirable words and should be handed to every teacher in the kingdom.

GENERAL PARALYSIS IN EARLY LIFE.

THE occurrence of general paralysis of the insane at a very early age has now been recognised for some years, and in a current number of the *Neurologisches Centralblatt* an abstract of a Jena dissertation by Dr. Clemens Streitberger appears, in which an account is given of two cases of this character. The first is that of a young woman aged twenty-one, whose conduct underwent a sudden and complete change, and she became at one time excited, at another absent-minded. In the course of three years she developed unsteadiness in walking, tremulous speech, and tremor in the tongue and hands. The knee-jerk on the right side was exaggerated and lost on the left side, and she became drowsy and apathetic ; she also had convulsive seizures, lasting for hours, and accompanied by loss of consciousness and relaxation of the sphincters. After this, great psychical change and affection of the cranial nerves took place, with paresis of the extremities and loss of control over the sphincters of the bladder and bowel, bedsores, and rapid emaciation. At the necropsy the cerebral membranes were found to be thickened, the brain atrophied, the ventricles distended, and the ependyma granular. In the cord the posterior and lateral columns throughout were degenerated, and the anterior columns also from the middle of the dorsal region downwards. The second case related was that of a young man aged eighteen, who had at that age to give up his situation in a warehouse on account of his inability to do the work he had been used to do. He then became dull and stupid ; his pupils were irregular in shape and did not react to light, and there was tremor of the tongue, unsteadiness of the extremities, and exaggeration of the reflexes. During the last three or four years there was great defect in intelligence, but a characteristic sense of well-being. Later there were convulsive attacks, sleeplessness, hesitating utterance, irregular handwriting, hemianopsia, difficulty in swallowing, and rise of temperature, rapidly leading to a fatal issue. After death the arachnoid was found to be thickened and discoloured, the ventricles being distended, the ependyma granular, and the dura mater pale. The grey substance of the cerebrum and cerebellum was also discoloured, and the cord altered. An analysis of 41 cases of general paralysis in youth shows that in 17 syphilis was certain and in another 6 probable ; nervous heredity was present in 21. Another curious fact was that of 36 cases of this variety of the disease 19 occurred in women and 17 in men, a strange contrast to what is the experience in the ordinary form.

STATE CHILDREN AND THEIR ANTECEDENTS.

OF all social problems none is, perhaps, more difficult than that relating to provision for State children. In our own country the subject has received a great deal of attention, and it is almost universally admitted that "the barrack system" is destructive of the best elements of child nature and the influences of home. Fourteen years ago the colony of New South Wales discarded this system for the boarding-out method, and the report of the Hon. Sir Arthur Renwick, President of the State Children's Relief Board, for the year ending April 5th, 1895, affords strong evidence of the superiority of the method which gives to the child such training as is only to be obtained in the family. From an economical point of view the boarding-out method, too, is to be commended. A striking feature exhibited in the report is the increased number of young children who have been placed under the control of the board during the year, and it is probably accounted for by the continued want of employment and the consequent depression and poverty of the working classes. In 1895 there were 365 more children under control than in 1894, when the number was 272 in excess of the previous year. During the official year under notice there was a total of 3174 children under the control of the board. An appendix to the report, showing the social antecedents of all children hitherto dealt with under the boarding-out system in New South Wales—a total of 6673—gives some instructive figures illustrating the part which crime plays in the making of State children. The number of cases where the father was dead or in gaol, and the mother of drunken or dissolute habits, was 212, and there were 30 cases in which both father and mother were drunkards. Prostitution and illegitimacy are answerable for some 314 cases. In most of the cases recorded one or both of the parents were dead or in gaol.

AT a meeting of the Pathological Society to be held on Feb. 18th Mr. William Anderson will read a paper on a case of Multiple Osseous Ankylosis of Obscure Pathology and Pathogeny. A discussion will follow on the Causation of Osseous Ankylosis of Joints in the Limbs and Spine. The honorary secretary, Mr. J. H. Targett, 6, St. Thomas's-street, London Bridge, will be glad to receive communications from anyone desirous of contributing to this debate.

THREE lectures on the Climate of the South of England will be delivered at Gresham College, Basinghall-street, E.C., on Jan. 21st, 22nd, 23rd, and 24th, at 6 P.M., by E. Symes Thompson, M.D., F.R.C.P. Lond., Gresham Professor of Medicine. The syllabus of these lectures indicates that Dr. Symes Thompson proposes to treat his subject, very

properly, from the meteorological, and not the medical, point of view.

WE learn from our own correspondent in Egypt that cholera is still confined to a few villages in the Delta and shows a tendency to die out. However, during the week ending Dec. 24th there were in all thirty-three new cases reported, and there have been altogether thirty-two deaths.

H.R.H. THE DUKE OF YORK has consented to preside at a dinner in aid of the funds of the Victoria Hospital for Children at a date to be fixed by His Royal Highness—probably about the third week in February.

Pharmacology and Therapeutics.

CALAYA IN MALARIA.

DR. MAURAGE of Paris has made use of the extract of Anneslea febrifuga known as Calaya, a leguminous plant, in nine cases of malarial patients from Madagascar and Tonquin. Four doses of about half a drachm each were administered in syrup at intervals of two hours. The first dose always produced a diminution of the temperature varying from 1·4° to 2·5° F. After the second dose the temperature fell still further. This antipyretic action was not accompanied by any sweating or by depression. On the contrary, the patients expressed themselves as feeling far better than they had done when they had been given quinine in previous attacks. The temperature, too, never fell below normal. In three of the nine cases no return of the fever occurred. In five there were subsequent attacks of a very mild character, the temperature never exceeding 101·5°, while in one case only there was a somewhat severe attack two days later in which the temperature rose to 104·7°; the treatment was, therefore, repeated, with the result that no further attacks occurred. The same medicine was tried in two cases of phthisis. Here, though the antipyretic effect of the drug was manifested, the fever returned the day following just as before. Dr. Maurage, therefore, thinks that calaya cannot be considered as more than a palliative in non-malarial fevers, but that in malaria it may really be put down as a specific.

PHOSPHATE OF SODA IN NERVOUS AFFECTIONS.

A physician in Jerusalem who has charge of the municipal hospital there has employed with great advantage hypodermic injections of phosphate of soda in two special affections of the nervous system. One patient was a woman who was suffering from syringomyelitis. After a month's treatment, during which fifty injections were administered, the pain completely vanished, and sleep returned. The articular effusions also decreased to half their former size. The other patient was a man suffering from unilateral astasia-abasia (Charcot's "neurasthénie dimidiée"), and he was discharged recovered after twenty-five injections, which were administered once a day.

DIPHTHERIA AND THE METROPOLITAN ASYLUMS BOARD.

THE Metropolitan Asylums Board have published a provisional report by Dr. Sims Woodhead on the cases of diphtheria which were sent to the laboratories of the Conjoint Board of the Royal Colleges of Physicians (London) and Surgeons (England) for bacteriological examination from Jan. 1st to Aug. 31st, 1895. The importance of having such a bacteriological examination carried out in hospitals is, of course, obvious, but if any such doubt existed it would at once be dispelled on reading this report. So long as the diagnosis of diphtheria was based on the gross physical signs and symptoms of the disease it is evident that all statistics on the question are subject to most serious error, owing to the inclusion or exclusion of the milder throat cases, according to the individual judgment of the person charged with making the diagnosis. Thus an epidemic of diphtheria which was very virulent in type but restricted in range would, if it occurred at the same time as an epidemic of non-diphtheritic sore-throat prevailed, which was included under the same category, be regarded as a more widespread epidemic of mild diphtheria. In a similar way a hospital which included under the heading of diphtheria other cases of simple non-diphtheritic nature would naturally present a much lower death-rate than those in which these were excluded. Under these circumstances all attempts to compare the relative efficiency of different modes of treatment must fail, and further progress on these lines be greatly impeded. The importance, also, of preventing non-diphtheritic cases being kept apart and thus obviating their exposure to the infection by being placed in the same wards as the diphtheria patients must be quite evident. Perhaps, however, the most important *rôle* which the bacteriological diagnosis has to play in this relation is in determining when the throat in convalescent cases has become free from diphtheria bacilli, and the patient can be discharged with safety and no longer be a centre of fresh infection. As it has already been established that patients in the convalescent stage can retain for long periods the diphtheria bacilli in an active condition, it is of the utmost practical importance that the best local and general measures of treatment for their removal should be discovered and recognised, and this could only be attempted when the results were controlled by a constant bacteriological examination.

The figures given regarding the different hospitals are unfortunately not exactly comparable, since in many cases the clinical diagnosis does not appear to have been given at the time of bacteriological examination, and it is suggested in the report that it was afterwards based upon the result thus obtained; still, we can only judge from the figures which have been placed before us. The number of examinations made were 6408, and as these were obtained from 2936 cases it is apparent that a considerable number of re-examinations had been carried out either for the purpose of making absolutely certain of the bacteriological diagnosis where it seemed at variance with the clinical, or for the purpose of determining when a convalescent case might be discharged with safety. It was found that in only eighty-five cases did a re-examination reveal the presence of diphtheria bacilli where a negative diagnosis had been previously recorded, and this may be ascribed to failures in the *technique*, such as to a mis-inoculation or even, perhaps, to the patient having developed the disease while in hospital. The very full and exhaustive tables which are appended show clearly the trustworthiness of the bacteriological diagnosis, as the percentage of cases in which the original diagnosis had to be reversed was very small; still, no one would seriously contend against the advisability of controlling by re-examination all doubtful cases. The assistance which it gives in confirming or reversing the clinical diagnosis is brought out most clearly where the diagnosis was still in doubt. Thus, out of 451 cases which were regarded as diphtheria in hospital, in 51 the presence of diphtheria bacilli could not be demonstrated, while out of 1763 cases in which the diagnosis was doubtful or was not stated no less than 1112 were found bacteriologically to be true cases of diphtheria. It is interesting to observe how far the clinical diagnosis agreed with the bacteriological in the different hospitals. This will be seen in the following table, in which we have computed the percentages of cases which were recognised bacteriologically as diphtheria from among those which were returned as clinically doubtful or in which no diagnosis was given by the hospital authorities:—

	Per cent.		Per cent.
North-Eastern Hospital ...	38	Eastern Hospital	61
North-Western Hospital ...	71	Fountain Hospital	69
South-Eastern Hospital ...	68	Western Hospital	60
South-Western Hospital ...	56		

The above figures sufficiently clearly indicate the necessity for a bacteriological diagnosis and proves to what an extent the opinions of experts may vary as to what is clinically diphtheria. There are no doubt many other interesting facts which might be deduced from the figures given in this provisional report, and we feel sure that Dr. Sims Woodhead will make full use of the immense collection of material at his disposal in the complete report on the year's work which is promised.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER II.

The Profession at the Beginning of the Century.—The Privileged Classes and the Rank and File.—The Staff of the United Hospitals.—Edward Grainger.—The Private Medical Schools.—The Medical Student of the Period.

THE profession at the time that Thomas Wakley joined it—viz., 1815—was sharply divided into two classes: those who were going to be leaders, and those who were going to remain in the rank and file. Now and again a man whose original conditions ought to have limited his aspirations would break through these conditions and become a leader when in the ordinary course of events he should have remained a private, but this occurred infrequently. The almost invariable rule was that those who were specially picked out by circumstances quite independent of merit for promotion received that promotion, less fortunate individuals remaining in the shadow of obscurity, whatever their claims to success. Of the men who were predestined to become leaders there were two divisions, corresponding to the two great divisions in the profession of healing—the physicians and the surgeons. The predestined rulers in medicine were the men who had acquired a recognised university degree and subsequently to graduating had been elected to the Fellowship of the Royal College of Physicians of London. Their surgical counterparts started in a less dignified, if more facile, manner on the saunter to a successful future. They became apprenticed after payment of large fees to the eminent surgeons holding posts at the different hospitals, hoping to succeed, and very generally succeeding, to the appointments of their masters. This is a somewhat crude way of stating the methods of procedure, but in the main it is true. The fees might be waived because the young man was a relation or the son of a friend of the great surgeon, but from a stranger they were exacted, and the consideration received in return was not only the ordinary instruction due from master to pupil, but a very definite promise of the reversion of some of the senior's emoluments. The understanding that the pupil should succeed his master in any hospital appointments the latter might hold was generally a tacit one, though occasionally some sort of documentary evidence of the contract, something in the nature of a bond, is known to have been in existence. The eminent surgeons could not absolutely give away the hospital appointments, which were then, as they are now, in the gift of the lay governors of the hospital, but they could, and did, bring influence to bear upon the governors, and with wrong motives, or under circumstances that had the colour of wrong motives. Each man would naturally desire the election of the candidate from whom he had received an actual pecuniary consideration, for the sums thus paid were large, not infrequently amounting to £500, and the claims of merit would give way to those of expediency. The lay governors were canvassed, and it was not the best man who won, but the man whose backer most clearly acknowledged the claim upon him and so most urgently advocated the candidature among the persons possessing votes.

To sum up, hospital appointments, with all their advantages, direct and indirect, honourable and pecuniary, were given to certain Fellows of the Royal College of Physicians, family and personal influence counting for much in the matter; examinerships and lectureships at the Royal College of Surgeons were given to certain hospital surgeons; and these hospital surgeons were elected to the appointments, which qualified them for their professorial duties, largely in consequence of their ability to pay big fees upon their introduction to bigmen. The man who could not pay these fees or afford a university education was fated to remain in the rank and file of his profession. There were of course exceptions, and the names of one or two will readily occur to all, but the medical corporations were slow to discover merit unless it was brought to their notice by approaching them along the usual avenues. Now and then the public would force upon their attention one who otherwise had no claim upon it, but these cases were rare, though not so very rare as they are now; and it was just as well then that they were rare as it is well now that they are nigh impossible of occurrence, for great fame won first from the laity is but seldom the proportionate reward of merit, and the knowledge that it can be readily obtained must ever seduce many from the highest aims. It is undoubted that at the beginning of the century members of the profession appealed more directly to the public for an appreciation of their scientific talents than would be deemed seemly in these days, and that, to the shame of the medical world, it was occasionally left to the public to point out to the profession who were their greatest men.

Thomas Wakley did not belong to the privileged classes. He came to London to make his own way for himself, with no university course behind him and no friends within the ring-fence of hospital administration. A brother of his brother-in-law, Phelps, to whom he had been apprenticed, consented to look after him and to be the channel through which his modest allowance could be supplied to him, but Phelps could not assist him in the prosecution of his studies, and was possessed of no influence in the medical circles of London. That he was greatly trusted by his family—trusted to an extent that no boy of his age save one who had shown himself capable of meeting considerable responsibilities would have been—is proved by the fact that he was virtually left to himself from the beginning of his London life, as far as his professional career was concerned. The united hospitals of Guy's and St. Thomas's were recommended to him as the best institutions to "walk," as the phrase then went, by the gentlemen to whom he had been apprenticed, but nothing was definitely settled for him, and that he had a power of veto is proved by the fact that before entering any school he went round to listen to the various lecturers that he might have some personal experience to guide him in his choice. At that time it was usual for the medical student to take out a course of lectures here with one man and there with another. The Borough or United Hospitals (viz., Guy's and St. Thomas's), St. Bartholomew's, and London, were the only institutions at the time that had a medical school attached to them. At the other hospitals students received the privilege of walking the wards and attending the practice of the charity, but their scientific education had to be obtained elsewhere. Young Wakley abided by the selection of his advisers to this extent that he joined the school of the United Hospitals, one of the three places where he could have obtained a complete curriculum under one jurisdiction, but he decided to supplement his hospital course by attending the private school of the Graingers. He chose the hospitals because of his admiration of Sir Astley Cooper as a teacher, while the choice of a private school was one of convenience, the famous anatomical academy of the Graingers being in Webb-street, Borough, hard by.

The United Hospitals were at that time at their zenith. The story of their union is as follows: The students of Guy's

[1] Chapter I. was published in THE LANCET of Jan. 4th.

Hospital had by courtesy been allowed to attend the operations at St. Thomas's Hospital, and St. Thomas's had made a similar concession to Guy's. But in 1768 it was formally resolved that the pupils of each hospital should have the liberty of attending not only the operations but the surgical practice of both institutions, and the money received in fees was to be divided in certain proportions between the six surgeons of the hospitals and the two apothecaries who did their behests. From which it will be seen that the amalgamation of the two schools did not extend beyond their surgical practice. The staff of the hospitals at the time when Thomas Wakley entered as a student was a decidedly good one generally, though on its surgical side it formed a remarkable example of the part that nepotism and purchased favour played in the securing of appointments—ugly facts to which allusion has already been made. Sir Astley Cooper, or Mr. Astley Cooper, to be strictly accurate, for he did not receive his baronetcy until six years later, ruled supreme in 1815. He had been the apprentice of the elder Henry Cline, a surgeon of almost equal celebrity in his day, and lecturer on anatomy and surgery to St. Thomas's Hospital. In 1800 Cooper became his master's colleague as lecturer, and was appointed surgeon to Guy's Hospital. In 1812 the elder Cline resigned, and his son, Henry Cline junior, became surgeon to St. Thomas's Hospital and followed his father as joint lecturer with Sir Astley Cooper. Sharply on this came the election of three of Sir Astley Cooper's nephews—viz., C. Aston Key, Bransby Cooper, and Frederick Tyrrell—to different posts, while the next surgical vacancies were filled by his apprentice, Benjamin Travers, and J. H. Green, Henry Cline's cousin, respectively. The aggregate ability of this group of surgeons is certain, and their individual skill was only once called into serious doubt; but they owed their elections to other claims than their merits.

Thomas Wakley attended the joint anatomy classes of Henry Cline, senior, and Sir Astley Cooper during the autumn session of 1815 and the spring and autumn courses of 1816. These were delivered at St. Thomas's Hospital, and his signature in witness of his attendance at them is in the books of the hospital, and is a flowing and very exact facsimile of the signature of his maturer years. At Guy's Hospital he attended Sir Astley Cooper's lectures on the Practice of Surgery, where he also did his surgical dressing and ward work. In those days students dissected and acted as dressers at the same time, an arrangement that might be calculated to impress the knowledge of pathological anatomy upon them, but could not fail to have been attended with some risk to the patients. His dissecting was chiefly done at the school of Edward Grainger. Edward Grainger was a thoroughly good anatomist. His laborious life and early death precluded him from literary achievement, but his memory was green in the profession for a generation after his death, and, in medicine at any rate, that comes very close to fame. He was essentially a teacher on broad lines, recognising what so many teachers fail to recognise, that it is badly spent time to instruct a student how to keep in the middle of the road or where to avoid a pitfall unless the road itself has been previously pointed out. Thomas Wakley's own account of his teacher in the columns of THE LANCET[2] bears this out very well. After recording the extraordinary success which Edward Grainger met with as a teacher he continues:—

"Though in his lectures he did not dwell much on the minutiæ of anatomy, we know that this was done for the express purpose of not perplexing those who were only beginning their studies. His lectures were devoid of many physiological illustrations, ... but his great *forte* consisted in his power of communicating his knowledge to others. His descriptions were clear and concise, and his arrangement strictly logical."

This praise of his teacher, which, it must be admitted, was a little modified by subsequent expressions occurring on the same page, is the only direct allusion that the first Editor of THE LANCET ever made in these columns to his experiences at a private anatomy school. But these private schools played a regular part in the medical education of the London student of the day and for some time to come, and, although coincident with the institution and development of schools in direct connexion with all the great general hospitals of the metropolis, they became superfluous and disappeared, they were at the time responsible for a condition of manners among the students, of morals, of ill, and of good, that lingered for a quarter of a century after their dissolution. The history of these schools—Carpue's School, the Gerard-street or Dermott's School, Lane's School, the Webb-street or Graingers' School, the Aldersgate School of Tyrell and Lawrence, the Windmill-street School, Brookes's School, and others—will now never be written, for no succinct record of them has been handed down by anyone with personal knowledge of them. Yet such a history, if the proper person were alive to write it, would form a most interesting chapter in an exhaustive study of the rise of medical education in England; in fact, it would form the first chapter in such a study.

Each of these schools was conducted generally in connexion with a hospital, although they were strictly private enterprises. The Royal College of Surgeons and the Society of Apothecaries accepted work done at them and attendances registered at them as evidence of medical study. There were in those days no formal signatures required to testify that a man had duly heard a certain number of lectures or been in the wards a certain length of time. There were no precautions taken against personation at the examinations, a thing which occurred frequently, and little attempt was made to gauge a candidate's knowledge before turning him loose upon the public with a licence. Testimony to certain apprenticeship and to payment of fees for certain lectures and the privilege to attend the practice of a hospital had to be forthcoming, and the rest was plain sailing. It was to meet the wants of a happy-go-lucky curriculum of this sort that the schools existed, and the looseness of the requirements of the examiners reacted upon the schools, so that they became hotbeds of a rowdy Bohemianism that was as undoubted in cold fact as it is, and ever will be, celebrated in comic fiction. There is nothing comparable to the life of the medical student in London, as fostered by the conditions under which he lived and studied, at the beginning of the century, save, perhaps, the life of the Parisian art student at that time and later. And what the studio of the professor, as depicted by Thackeray, Stevenson, and Du Maurier, was to the artist, the dissecting-room was to the medical students—a centre where all met on common ground—the ground of professional interest—and all vied with each other in the narration of episodes illustrative of their ingenuity under the stress of poverty, their coolness under the threat of the law, their personal courage, and their physical attractiveness. And all this inter-communication taking place in the dissecting-room bred a familiarity with repulsive objects which effectually did away with a proper regard for the decencies of life, and led to the interlarding of conversation with similes drawn from the mortuary table or suggested by the details of anatomical research. The result was the establishment among the mass of the London students of a regular and accepted tone of rowdiness and shiftlessness, which tone it became almost necessary for each man to assume, if he had it not, and

[2] THE LANCET, vol. i. 1824, p. 423.

an act of *esprit de corps* to transmit to his juniors. Bob Sawyer and Joe Muff were not gross caricatures; they moved in the dissecting-rooms of the private schools, lived in the bars of Fleet-street, and had their being in the supper-rooms of Covent-garden — not, perhaps, as individuals, but most certainly as well-pronounced types. Their creators did not evolve them wholly from inner consciousness; they but dotted the i's and crossed the t's of a human document, not over-hard to read before their artistic amendment. When the medical students of much popular fiction are accepted at the present day, as they are occasionally by a public slow to mark the signs of the times, as a fair presentment of the modern aspirant to a medical career, all who know feel bound to rise up and protest angrily; but Bob Sawyer, Joe Muff, and the egregious Tom Delorme and their friends were drawn in a spirit of caricature and exaggeration, yet with no wild disregard of facts. The London medical students of 1815, when Thomas Wakley threw in his lot with them, were very much as Dickens drew them some ten years later, and the conditions under which student life was passed were responsible for much of the wildness and irregularity. The uselessness, in most cases, of aspiring to any great position in their profession, and the low standard of proficiency required of them by the examiners, were not calculated either to urge them to consistent work or to inspire them with much professional ardour. The herding together of great numbers of students at the private schools—sometimes a popular school would have as many as 300 nominal pupils in a session—did away with any attempts to provide individual attention, while the lecturers at these institutions were not, as a rule, in a position to insist upon the presence of their pupils, to enforce order when they were present, or to check insubordination. Those who cared to work might work, and those who did not want to work need not. All medical students were not dissipated rowdies—it is not desired to convey that impression—but a large proportion led lives that might well have ended in their becoming such.

Some of the foregoing may seem a digression from the course of a biography of Thomas Wakley, but to estimate his career aright it is necessary to understand his environment at all points.

(To be continued.)

THE ROYAL VICTORIA HOSPITAL, SOUTHAMPTON.—At a special meeting of the governors of this hospital on Jan. 2nd it was decided to abolish the ticket system. Formerly each subscriber of a guinea received four tickets of the nominal value of 5*s.* 3*d.*, but in practice this has been found to be a purely fictitious value. It was said that in the days when the hospital was little more than a dispensary the plan had been a good one, but the system had not been successful since the establishment of beds. The chairman of the house committee (Dr. Roberts Thomson) said they wished to make the institution actually a free hospital. An amendment was defeated by twenty-seven votes to nine.

FOOTBALL CASUALTIES.—A young man aged twenty-four years, who received injuries while playing a match on Sept. 1st last at Fallowfield between the St. Mary's (Hulme) and Ladybarn teams, and subsequently taken to the Manchester Infirmary, died there on Dec. 28th, 1895, from a fracture of his spine.—While playing at Chester recently one of the Glossop forwards was removed from the field suffering from concussion of the brain.—A young man aged nineteen years, of Ombersley, died in the Worcester Infirmary on Dec. 31st from injuries sustained in a match on the previous Saturday.—While playing at Hoylake, on the 28th ult., for the Heswall against the Hoylake team, a young man fractured his leg and was conveyed to the Birkenhead Borough Hospital.—In a Northern Union match at St. Helens, Liverpool, on the 1st inst., between the St. Helens and Mannirgham teams, the captain of the former team sustained a "twist in the knee" and injury to the ankle.

THE LANCET Special Sanitary Commission ON DISINFECTION.[1]

II.—AN IMPROVED MEANS OF APPLYING CURRENT STEAM FOR THIS PURPOSE.

FIRST and foremost in the interests of public health it is important that means of disinfection known to be satisfactory from the points of view of efficiency, economy, and simplicity should be at hand. We are continually being asked as to what, in our opinion, is the best way of carrying out on a practical scale the disinfection of bed linen, clothes, and other articles of every-day use. The use of chemicals is in most cases interdicted, because they may injure the fabrics to be treated, or because the materials are such as do not admit of exposure to chemically active vapours or liquids, or because these can never sufficiently penetrate the material so as to effect complete disinfection, or, again, because the articles are of such dimensions as to preclude treatment by this method. Undoubtedly disinfection by means of heat or of a hot innocuous gas, such as steam, is the most satisfactory way of dealing with infected articles. The process is not injurious to the fabric when properly carried out, is efficient as regards its sterilising powers, and need, moreover, not involve, as we shall presently show, any large outlay as to cost, or any trouble or control beyond the capacity of a person endowed with ordinary intelligence.

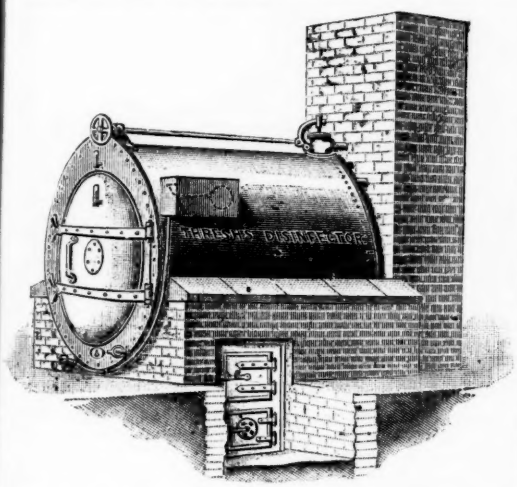
Steam at 100° C. or above that temperature has, we are of course aware, been employed with more or less success for this purpose. In general, however, its adoption has entailed a good deal of expense consequent on the more or less complex character of the apparatus used involving a certain amount of engineering knowledge and skill, which is requisite when the maintenance of a certain pressure of steam in excess of ordinary atmospheric pressure is an essential condition. Dr. Thresh of Chelmsford, the medical officer of health for the county of Essex, has, by a method which is at once as ingenious as it is simple, succeeded in producing a steam disinfecting apparatus the important features of which are that, while the necessity of high pressure to keep ordinary steam above its boiling point is quite dispensed with, yet steam is successfully employed at a temperature several degrees above the boiling point of pure water to ensure the complete destruction of pathogenic organisms. The need of careful supervision and control, therefore, in regard to the rigid regulation of valves is done away with. The principle of its working rests upon the well-known physical fact that when water contains a substance in solution its boiling-point is raised proportionally to the amount of substance dissolved, and that, further, the temperature of the steam given off by such a solution when boiled is several degrees higher than the temperature of the steam evolved from ordinary water at the common atmospheric pressure. Magnus and others have found, for example, that when a solution of chloride of calcium was boiling at 107° C. a thermometer in the steam indicated 105½° C., and when by concentration the boiling point had risen to 116° C. the thermometer in the steam indicated 111·2° C. The steam, therefore, emitted by a saline solution when boiling is in the condition which the steam of pure water would be if heated under atmospheric pressure to the temperature of the boiling solution.

It is the application of this principle which Dr. Thresh has taken advantage of in securing the requirements of a simple and efficient disinfector. The construction of the machine is consequently simple. In a word, instead of using water in the boiler, he employs a solution of calcium chloride of definite strength and of definite and constant boiling point, the steam emitted from which passes into the disinfecting chamber itself, jacketed by the boiler, so that

[1] The report of our Commission dealing with a method providing both for the Ventilation of Hospitals and the Treatment of Infected Air at the same time will be found in THE LANCET of May 11th, 1895.

there is no possibility of the steam condensing, and a temperature certain to kill organisms is ensured.

To give details—and they are few—the following is the actual construction of the disinfector, which we recently inspected and thoroughly examined as to efficiency and other essential points at the isolation hospital at Chelmsford. It consists simply, as will be seen from the accompanying illustration, of a horizontal boiler, egg-shaped in section, and serving at the same time as a hot jacket round the hollow space which constitutes the disinfecting-chamber, the door to which is seen in the front. By means of a wheel situated on the top of the front of the machine a valve may be turned to admit the steam or to shunt it into the flue at the back. The steam is thus never allowed to accumulate at a pressure higher than the external atmosphere, and it can never be pent up to a dangerous point, since it is always free to escape either into the chamber or directly into the flue. When the exposure to steam is considered sufficient—generally about thirty minutes—the current of steam is shunted into the shaft, and air is induced to enter by opening the valve of a pipe situated just beneath the door of the chamber. The air so admitted passes through a pipe which is bent several times in gridiron form and immersed in the boiling liquid, so that the air admitted into the chamber to replace the steam is first raised to a temperature very nearly that of the boiling fluid itself. In our experiments an anemometer placed at the air inlet showed that air was passing through the chamber at the



rate of 4·4 cubic feet per minute. The capacity of the chamber being about 35·8 cubic feet, this would be equal to the atmosphere of the chamber being changed nearly four times in half an hour. To the left of the boiler and about two-thirds the way up is a small cistern with ball-cock connected, with a constant supply of water which feeds the boiler automatically as the solution is concentrated. The saline strength of the boiling solution is thus kept constant, and accordingly its boiling point never varies. The boiler is heated by means of an ordinary furnace, the doors of which are shown in the figure just below the brickwork on the left hand supporting the boiler. It occurred to us that it was possible that the solution of the calcium chloride would sooner or later corrode the boiler, but an examination of the boiler plates that had been some time in use revealed no sign of corrosion, nor could dissolved iron be traced in the solution. We are not aware that it has been shown that calcium chloride has any prejudicial action upon iron, although it is well known that magnesium chloride is very destructive to that metal, since it readily decomposes into hydrate of magnesia and hydrochloric acid.

In the series of experiments which we made with this machine due regard was had to the following points, which we consider to be the requisites of a disinfector that can safely be called satisfactory, and fit to be entrusted with so important a work, say, as that connected with an infectious diseases hospital. 1. Its actual cost should be such that it can be available for institutions, hospitals, infirmaries, workhouses, schools, &c., both large and small. 2. Its working expense or cost of maintenance should be small—commensurate, of course, with the amount of work it has to do; this should include the cost of labour. 3. It should be of simple construction and easily managed. 4. It should effect a uniform distribution of heat in all parts of the chamber, which should not vary. 5. The heat should attain the maximum as quickly as possible, and should insinuate itself into the innermost recesses of bulky articles, like bedding, &c. 6. It should satisfy bacteriological tests of infected material well wrapped up and, so to speak, guarded by folds of non-conducting material, as mattresses, blankets, &c. 7. The articles disinfected should come out uninjured and in the same condition as they went in, especially in regard to dryness.

The following experiments satisfied us on each and all of these heads:—

1. In regard to No. 1—that its initial cost should be such as to make it available for institutions both large and small—the following are the particulars of cost of the sizes of machines now being made, the prices quoted including the time of a man to test machine when fixed, supply of bricklayer's plans, &c.:—*Size A*, Disinfecting Chamber (1 door): 3 ft. 9 in. by 3 ft. 6 in. by 3 ft., with furnace and water-cistern, baskets, thermometers, lagging and testing after fixing charge for boiler, 60 guineas. *Size B* (1 door): 5 ft. by 3 ft. 9 in. by 3 ft., baskets, &c., 85 guineas. *Size C* (2 doors): 7 ft. by 4 ft. 6 in. by 3 ft. 6 in., baskets, &c., 120 guineas. *Size D* (2 doors): 8 ft. by 4 ft. 6 in. by 3 ft. 6 in., baskets, &c., 140 guineas.

2. As to No. 2 (its working expense being small), the following are our own observations on this head:—An intelligent labourer, such as one connected with a hospital, can, in the first place, manage the working of the machine without the slightest difficulty. The consumption of coal during seven hours' continued working in the Chelmsford machine was not more than 1 cwt.—costing, say, 1*s*. Mattresses, clothes, and bedding were during the whole of this time disinfected at intervals of one hour. The time required for the actual disinfection by the steam is thirty minutes, after which air is allowed to replace the steam for another thirty minutes. This point of procedure will be alluded to again later. This amounts, therefore, to the machine being charged seven times with articles for disinfection at a cost of fuel of 1*s*.—or, say, 2*d*. per charge.

3. In regard to the third requisite, we have already dealt with its simplicity of construction, which, as we have also pointed out, admits of its easy management by unskilled labour, or at any rate by a man of average intelligence.

4. The following experiments, and others to be described later, show how uniform is the distribution of heat in all parts of the chamber. For this purpose three maximum registering thermometers, A, B, C, were placed in various parts of the machine, as were also two thermometers, *a*, *b*, which, on registering 100° C., ring a bell by means of the mercury completing circuit of electric current from the battery. Maximum registering thermometers: A, first experiment, 221·5°, near door; B, 220·9°, far end; C, 213·3°, in the middle. This last reading is valueless, since it was found that the column of mercury had stuck, for on repeating the experiment with the thermometers placed *together in the middle* the readings were: A, 220·1°; B, 219·6°; C, 213·2°. Bell thermometers, first experiment: *a*, rang in four minutes; *b*, rang in four minutes.

5. The following experiments demonstrate the rapidity with which the maximum heat is attained, and also the extraordinary power possessed by steam of penetrating quickly into the innermost interstitial parts of fabric. A pair of blankets was placed in the machine with a bell recording thermometer (212° F.) and a maximum registering thermometer placed between eight folds of the material. The bell of the electric recording thermometer rang within eight minutes after the steam was turned on. The steam having been turned off half an hour after starting, and air allowed to displace the steam through the air inlet for thirty minutes, the blankets were taken out, and the thermometer inside the folds was found to register 216·4° F. In a second experiment the bell rang in eight minutes; the thermometer registered 214·8° F. With a second pair of blankets with electric bell recording thermometer and a maximum registering thermometer inside sixteen folds, and a maximum thermometer on the top of the blanket the bell rang in fourteen minutes and a half. The thermometer at the top of the blanket registered 221·9° F.; the thermometer within the sixteen folds

registered 217·6° F. In the second experiment the bell rang in thirteen minutes and a half, and the thermometer within the sixteen folds showed 215·2° F. A thermometer placed in a glass tube plugged with cotton wool showed that a temperature of 219 1° F. had been reached. In another experiment a large mattress was selected, with a bell thermometer on the top and another between the folds, and a maximum thermometer suspended in the machine, and one on the top of the mattress and another inside. The bell outside the mattress rang in eight minutes and that inside in thirteen minutes. The thermometer in the machine showed 220 0° F., that laid on the mattress 217·7° F., and that inside 214·4° F.

6. The following bacteriological tests are perhaps the most important results in the series, since we are now dealing with the actual sterilising power of the machine.

The method employed for testing the disinfecting action of the machine was as follows. A swab of cotton-wool wrapped round the end of an iron wire was impregnated with the test material and then placed between the folds of blanket, mattress, and other materials to be disinfected in the machine. Except in Series A 8 and A 16, the swab rested on the material, the cotton-wool plug of the tube being removed and placed by the side of it, and the wire end of the swab being inserted loosely in the same tube, so that its identity could be established by the label on tubes. In Series A 8 and A 16 the wire end of the swab was also inserted in the tube in a similar way, but it was plugged in quite tight with the cotton-wool plug, so that any infective matter left in the tube was accordingly protected in great part from the direct action of the steam present in the chamber, so that the steam could only come into action on the infective matter left in the tube by passing through the cotton-wool plug or else be sterilised by heat through the glass walls of the tube. In every instance the swabs were enveloped in some good non-conducting material. In Series A 8 and A 16, in particular, the conditions present were in all probability, therefore, much more unfavourable as regards the application of the disinfecting action than would ever occur in actual practice, so that, should the apparatus stand this test, it may be regarded as absolutely reliable. The infective material employed consisted of the organisms of diphtheria, typhoid fever, cholera, anthrax spore-bearing material, and staphylococcus pyogenes aureus, the common pus-producing organism. The cotton-wool swabs were infected in the following manner. They were first soaked in a vigorous broth cultivation of the test organism, so that the infective material might penetrate to the innermost parts of the swab; they were then rubbed over the surface of an agar-agar or blood-serum cultivation of the microbe, so that the swab became infiltrated with large masses of the infective material mixed with organic matter. The conditions present would be accordingly comparable to those found in linen contaminated with choleraic or typhoid evacuations, where no doubt the foreign substances present along with the disease germ would on drying tend to protect the microbe from external injurious agencies. The diphtheria, anthrax, and pus organisms employed had all been obtained from recent cases and were still virulent. The choleraic and typhoid organisms, on the other hand, had been under cultivation for a considerable time, and, although growing vigorously, were probably non-virulent. The anthrax material was tested as regards the resistance of its spores, with the following results. The anthrax spore-bearing material was tested as regards its resistance to heat, since it has long been recognised that different specimens of anthrax vary most remarkably as regards their powers of resistance. They were maintained for different periods of time at 80°, 90°, and 100° C., without apparently affecting their vitality, as will be seen from the appended table, the *plus* signs representing presence of, and the *negative* signs absence of, growth :—

A Control of Spore Material Used.

—	Five minutes.	Ten minutes.	Fifteen minutes.
80° C.	+	+	+
90° C.	+	+	+
100° C.	+	+	+

It may be mentioned, as indicating the resistant power of these test spores to the action of heat, that those which had been maintained at a temperature of 100° C. for fifteen minutes appeared to grow as rapidly and vigorously on the different media as those at a lower temperature, so that their vitality was apparently quite unimpaired. The swabs containing the infective material, which had either been exposed to the disinfecting agency or had been retained untouched to serve as controls, were treated as follows for the purpose of ascertaining whether the organisms were still in a living condition. The swab was withdrawn from the tube and drawn over the surface of an obliquely-sloped agar-agar or blood serum tube; it was then introduced into a tube of broth, in which it was well washed, and while saturated with the fluid was withdrawn and introduced into an oblique agar or serum tube, in which it was finally left to be incubated at 37° C., along with the other tubes. The first agar which was made from the swab would indicate the presence or absence of living microbes on its surface, while the second tube, which contained the swab saturated with broth, might show growth from organisms situated in the depths of the cotton-wool, when, perhaps, those on the surface had been destroyed. At the same time the broth tube in which the swab had been soaked was incubated with the other tubes as an additional test of the presence or absence of living organisms, while in every case of growth a microscopic examination, and, if necessary, cultivations, were made for the purpose of recognising the test organism in question or eliminating the results of accidental contamination. The results obtained will be found in the following tables :—

Controls.

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	+	+	+
Typhoid fever	+	+	+
Cholera	—*	+	+
Staphylococcus pyogenes aureus	+	+	+
Anthrax	+	+	+

* Apparently the organisms present on the surface of the swab had been killed by the process of drying, so that no growth was obtained in this tube, although a positive result is recorded in the broth and second tube.

SERIES A 8.—*Organisms placed between 8 Folds of Blanket, submitted to 30 min. Steam and 30 min. Warm Air under conditions already described.*

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	—	—	—
Typhoid fever	—	—	—
Cholera	—	—	—
Staphylococcus pyogenes aureus	—	—	
Anthrax	—	—	—

SERIES A 16.—*Organisms placed between 16 Folds of Blanket submitted to 30 min. Steam and 30 min. Warm Air, under conditions already described.*

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	—	—	—
Typhoid fever	—	—	—
Cholera	—	—	—
Staphylococcus pyogenes aureus	—	—	—
Anthrax	—	—	—

SERIES B 8.—*Organisms placed between 8 Folds of Blanket, submitted to 30 min. Steam and 30 min. Warm Air.*

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	—	—	—
Typhoid fever	—	—	—
Cholera	—	—	—
Staphylococcus pyogenes aureus	—	—	—
Anthrax	—	—	—

SERIES B 16.—*Organisms placed between 16 Folds of Blanket, submitted to 30 min. Steam and 30 min. Warm Air.*

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	—	—	—
Typhoid fever	—	—	—
Cholera	—	—	—
Staphylococcus pyogenes aureus	—	—	—
Anthrax	—	—	—

SERIES C.—*Organisms placed between Folds of Bed Mattress.*

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Diphtheria	—	—	—
Typhoid fever	—	—	—
Cholera	—	—	—
Staphylococcus pyogenes aureus	—	—	—
Anthrax	—	—	—

Experiment with a Book of 800 pages; Anthrax Organisms placed in the middle between the pages.

Test organism.	Presence or absence of growth.		
	First agar-agar or serum.	Second agar-agar or serum.	Broth.
Anthrax	—	—	—

7. Since, as will be seen in the experiments grouped under (5) and in the bacteriological experiments just described, the steam proved to penetrate completely through materials which may be supposed to offer obstruction to its passage, the next important thing to determine was whether it leaves the articles in the same condition in regard to dryness, or whether it affects them prejudicially in any other way. The blankets and mattress used in the experiments described under (6) were, therefore, at the same time weighed previously to placing them in the machine. The results were as follows:—

Original weight of blankets, eight folds, used in experiments marked Series A 8	6 lb.	8¾ oz.
Weight after exposure in the machine to thirty minutes steam and thirty minutes warm air, and then shaken for a few minutes in the open air	6 lb.	6 oz.
Loss		2¾ oz.
Original weight of blankets, sixteen folds, used in Series marked A 16	7 lb.	3½ oz.
After disinfection and shaking for few minutes in the open air	7 lb.	2¾ oz.
Loss		¾ oz.
Original weight of blankets, eight folds, Series B 8	6 lb.	6½ oz.
After disinfection	6 lb.	6½ oz.

No change in weight.

Original weight of blankets, sixteen folds, B 16	7 lb.	2 oz.
After disinfection	7 lb.	1¾ oz.
Loss		¼ oz.

On shaking the blanket a second time in the open air its weight was 6 lb. 15¾ oz.

Original weight of mattress, Series C	34 lb.	2 oz.
After disinfection	34 lb.	6 oz.
Gain		4 oz.

Some further experiments gave the following results:—

Original weight of a suit of clothes	6 lb.	5 oz.
After disinfection	6 lb.	1 oz.
Loss		4 oz.

An electric thermometer was placed inside the trousers pocket; the bell rang, registering 100° C. in ten minutes and three-quarters.

Original weight of eider-down quilt	6 lb.	11¼ oz.
After disinfection	6 lb.	8¾ oz.
Loss		2½ oz.

The bell thermometer placed between the folds of the quilt rang in thirteen minutes, and a maximum showed that a temperature of 213·1° C. inside had been attained, while a thermometer resting on the top of the quilt indicated 221° C.

The following experiments of a miscellaneous character are also worthy of mention as affording additional evidence of the perfectly harmless process which articles as a whole placed in the chamber go through, in spite of the temperature being several degrees above 212° F. Some tobacco in a tin was weighed and placed in the machine. It weighed with the tin 1 lb. 3¾ oz. It weighed exactly the same after exposure to the steam, and its condition, and certainly its smoking qualities, were not in the least impaired. It is well known that tobacco has a strong affinity for moisture, so that this may be regarded as a severe experiment. Had there been any condensation of steam the result would have been quite different. Even with tobacco wrapped in delicate tissue paper, as in cigarettes, no change could be remarked. Further proof that condensation does not occur and that the steam must be perfectly dry was also attested by the fact of the colouring of tinted paper, cheques, pieces of common chintz, or coloured muslin does not spread on the fabric, or extend beyond the original impress or pattern. An interesting result was obtained when lucifer matches of three kinds, the phosphorus- and sulphur-tipped match (the familiar Tandsticker of the tramp), the wax match, and wooden safety matches, were placed in the pockets of some clothes placed in the machine. The steam was turned on only for fifteen minutes. In no case had the matches ignited, although the temperature in the pockets was indicated by thermometers to have been well over boiling point. Oddly enough, on bringing the clothes into the air and taking the Tandstickers out of the pocket they instantly fired. The wax matches had melted and soaked into the cloth. Lastly, there were placed in the machine certain materials which might be supposed to be injured by the heat, but it was found that horsehair, and even strips of macintosh rubber, such as is used in infectious hospitals, were not injured.

To sum up, it will be seen that in no single particular have we found the invention of Dr. Thresh to come short of the requirements which we have laid down as essential in a machine intended for practical disinfection. In the first place, it is of moderate cost, the expense of working it is small, it requires no special management, and yet is free from the risks attending the use of steam under pressure. Next, and above all, it is efficient as a steriliser, since it has been shown in the bacteriological experiments above described that the machine is able to render innocuous the disease organisms therein mentioned. Even the resistant spores of bacillus anthracis were rendered completely inert, so that it may be concluded with safety that this apparatus would act effectively on all infective material which in every-day practice would be submitted to its action. Not less important is it that the process of disinfection by steam is effected by it not only without injury to the articles and fabrics which commonly require disinfecting, but it leaves them absolutely unwetted, and, indeed, in many instances in a drier condition than they were previously to treatment. In short, the machine fulfils the conditions of a really efficient disinfector for all practical purposes, and, seeing how difficult a task it has hitherto been to satisfactorily comply in every particular with these conditions, the fact that such an appliance is now at the disposal of those responsible for the maintenance of the public health will be welcomed by all interested in sanitary advance. The machine is the property of the

Thresh's Steam Disinfecting Company, Ltd., of which Mr. J. C. Smith, of Tindal-square, Chelmsford, is managing director.

THE ASHANTI EXPEDITION.

THERE is nothing particular to chronicle since last week regarding this expedition, beyond the fact that the troops have crossed the Prah and are advancing in accordance with the official programme, and that the rumoured proposals for peace from King Prempeh are not believed. The force is, speaking generally, in excellent health and spirits. There are about fifty sick at the base, and, as might have been confidently expected, cases of fever have appeared among the force at Prahsu and across the Prah, but they are neither numerous nor serious. The total number on the sick list is about seventy. The expedition seems to be well supplied with carriers, and the alliance of the Bekwai tribe will greatly facilitate its march to Kumasi. Among the stores sent to the front supplies of ice have been forwarded to the hospital at Mansu. The arrangements—both transport and medical—are good, and are, so far, working admirably. On the last occasion the Ashantis fought us at Amoaful, but it is believed that on the present occasion, if any fight takes place, it will be at some point nearer Kumasi.

(FROM OUR SPECIAL WAR CORRESPONDENT.)

SAILING ALONG THE WEST AFRICAN COAST WITH THE CONTINGENT BOUND FOR ASHANTI.

Friday, Dec. 14th, 1895, 8.30 A.M.

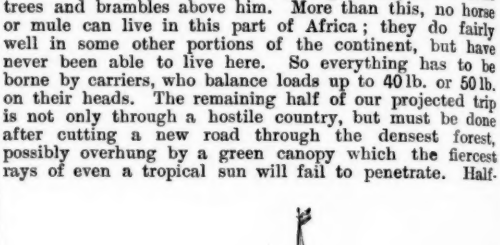
WE have just now sighted our port of destination. It is a fine, warm morning, cloudy overhead, but somewhat hazy to leeward, obscuring objects at a short distance from us. Everybody is overjoyed at the prospect of reaching land once more, and the hilarity of some of our younger soldiers, officers as well as men, certainly proves their fitness, both in mind and body, to undertake the risk that lies before them. At 10.45 we came to an anchor off Cape Coast Castle. Two men-of-war (English gunboats) are companions beside us. A very heavy southerly swell, causing the *Bathurst* to roll considerably, bids us welcome to the West African shore. Several native boats soon came alongside, and immediately their crews were clamouring with expressive gesticulations to obtain the first chance of receiving cargo and war material from our ship. As soon as the hatches were opened the delivery of it commenced, the process being very carefully and skilfully superintended by service officers detailed for that special duty.

I find the town and precincts of Cape Coast Castle considerably enlarged as well as improved, as far as sanitation is concerned, since my visit here in H.M.S. *Wye* some years ago, and I am very pleased to say that little or no fever at present exists in the town or neighbourhood, and our contingent (by this vessel, at any rate) reaches its port of disembarkation healthy as well as fit to a man. It is most devoutly to be hoped that if the advance on Kumasi can possibly be pushed on with rapidity (of course consistently with the health and marching endurance of the men before the rainy season sets in) our present little venture may, after all, be productive of good results and go far beyond the expectancy of the most sanguine of those deeply interested in us at home.

His Royal Highness Prince Christian Victor and Sir Francis Scott, both looking remarkably well after their trip, left our ship for the shore about 4 P.M. yesterday.

Looking towards land during the evening now fast closing in, a prominent feature in the view before me is the grand old fortified, capacious, verandah-encircled fort, planted on a sort of rocky promontory. This huge battlement stands out in a bold, white-relieved foreground, against a sombre green-coloured background, the complementary reddish-brown-tinted earthy surroundings adding to the effect considerably. Then one observes here and there, as if thrown in gratuitously by the hand of the gifted painter, a great number of oddly built, yet withal very picturesque, buildings, evidently erected by the architect without any pretension as to any definite style or design, whilst groups of men and women (negroes), standing along the surf-fringed shore, with the golden-orbed day-god just now setting beneath a bank of mauve-tinted clouds before them, and the lovely waving, sap-green cocoanut trees behind them, go far to complete a scene as replete with grandeur as the most fastidious of artists could ever desire to commit to canvas.

To propose at home a journey to Kumasi is indeed a very easy matter, but to arrange out here details for such an undertaking is quite a different one. First of all, I must tell you that half of the road, some seventy-five miles long, is little better than a mere cattle track, so overstrung in places that a rider could not sit a horse long without running a risk of decapitation from the strong, thickly interwoven trees and brambles above him. More than this, no horse or mule can live in this part of Africa; they do fairly well in some other portions of the continent, but have never been able to live here. So everything has to be borne by carriers, who balance loads up to 40 lb. or 50 lb. on their heads. The remaining half of our projected trip is not only through a hostile country, but must be done after cutting a new road through the densest forest, possibly overhung by a green canopy which the fiercest rays of even a tropical sun will fail to penetrate. Half-



The ss. *Bathurst* (with the staff of the Ashanti Expeditionary Force on board) passing, and signalling to, Cape Verd, West Coast of Africa.

way to Prahsu (*lit.* township on the River Prah) the telegraph wire has been laid, and our sappers start to-day or to-morrow in order to complete it up to that place. Having remained on board the *Bathurst* nearly all day I have had unusual opportunities of watching the unloading of the cargo into the native surf boats, a by no means easy undertaking considering the very heavy ground-swell thereon, making our vessel heel over at times to an angle of 15° or 20°. But I can only say that, so far as my judgment (as an old salt) goes, the manner as well as the expeditious style of its performance reflect the very highest credit on the officers, naval as well as military, who have been entrusted with the carrying out of this most important duty. Surgeon-Major Wilson and Surgeon-Captain Eckersley are responsible for the medical stores on board the *Bathurst*, and, as I previously had to draw the attention of the readers of THE LANCET, whilst I was at Suakim, to the unsatisfactory arrangements made for the transit and delivery of medical stores out there, I very naturally watched the performance of this most essential part of the Army Service or Medical Service Corps' work with the keenest interest in this instance. To say that the system of transport as exhibited by the officials who have had the carrying out of the present contingent's medical requirements bears favourable comparison with that of the past is but a faint expression of the truth, for I am able as well as pleased to chronicle, for the information of any interested in

the matter, that a very great and marked improvement as regards stowage and delivery has taken place all round. Medical stores and requirements, so far as I observed, seemed to have been better numbered, marked, and catalogued, and placed together in the hold of the ship, and certainly were more come-at-able than they formerly were. The medical officers in charge remained on board and personally superintended their careful delivery over the side into the native boats, and when they arrived on shore they were received by other officers detailed for that duty there, and were properly and expeditiously sent on to the store allotted and set apart for that purpose, instead of being sent on shore and mixed up indiscriminately with any other goods, as they unfortunately formerly were in the Soudan campaign. Medical details cannot be quite settled until after the arrival of the principal medical officer, so I cannot say more till the next ship comes in.

I enclose a pen-and-ink sketch of our boat, having placed myself mentally some three miles outside her. The date of the sketch is Dec. 5th, when we were off Cape Verd.

THE PROGRESSIVE DEVELOPMENT OF PORT SANITARY ADMINISTRATION.

THE cholera recrudescence of recent years has, fortunately, left its mark but faintly impressed upon our bills of mortality, and as regards this country, at least, it will be remembered in the history of sanitation more by the awakening of our port sanitary authorities to their obligations and their powers for ameliorating the condition of the seafaring population, than by the mortality it occasioned. The cholera epidemics of 1831–32, 1848–49, 1853–54, and 1865–66 have all left their marks upon the sanitation of this country, and the last outbreak—to which we are referring—has not been without its quickening effect in this direction.

The very complete and detailed report which has just been issued by the medical department of the Local Government Board on the Port and Riparian Sanitary Survey of England and Wales in 1893–94 will form a valuable work of reference, by which the further progress of our port and riparian districts may be gauged, and it furnishes also a good example of the results which may be achieved in the sanitary progress of this country by the efforts of a vigorous and wisely administered central department in conjunction with those of the local sanitary authorities. In his introduction to the report on the survey—the general control and arrangement of which were entrusted to Dr. Barry, by whom the body of the report is written—Dr. Thorne Thorne refers to the fact that in accordance with the principles which govern the policy of our sanitary administration the ports of England and Wales, even though removed but a short distance in space of time from cholera-infected ports, are always open to shipping, and that thus it is a matter of paramount importance that our port and riparian sanitary administration should be as efficient as it can be made. The emergency survey of 1892, which was undertaken owing to the rapid diffusion of cholera across Russia in the summer of that year, revealed the fact that our littoral defences were not then in such a condition as to afford a guarantee that sea-borne cholera would be dealt with in the best practicable manner, nor did it appear that there was that proper supervision over the sanitary condition of the vessels and crews frequenting our ports which was had in view when constituting the port sanitary authorities. Under these circumstances it was determined to at once, under the advice of the medical officer of the Local Government Board, undertake a more detailed and systematic survey, and the report just issued is a record of the work then done, of the conditions which obtained, and the improvements which have been effected. When the survey was commenced it was discovered that, out of the sixty port sanitary districts of the English and Welsh littoral, in only one-third was the general administration satisfactory and efficient, the term "efficiency" being held to mean the services of a competent and adequately remunerated medical officer of health and a properly instructed inspector of nuisances, the provision of means for isolation and disinfection, the adoption of compulsory notification, and in some districts regulations under Section 125 of the Public Health Act, 1875. In estimating the degree of efficiency special regard was had to the administrative arrangements for ensuring the sanitation of vessels and the health of crews arriving in the port. In another third of the port sanitary districts the administration was lax and inefficient, and in some instances, notwithstanding the protests of the Board, "the miserable pittances" paid to sanitary officers seem, Dr. Thorne Thorne significantly remarks, "to have been contrived so as to encourage, if not to suggest, the neglect which was found to prevail." The remaining third of the port sanitary districts occupied a position midway between the two-thirds specifically referred to. Having regard to these facts, it is a fortunate matter that the highest efficiency was, as a general rule, found in our most important and most frequented ports. The above remarks more particularly apply to general sanitary administration in our ports, but in regard to the special duties under the Cholera Orders it is reported that the arrangements for medical inspection were satisfactory in all but five port districts, while in the ports of London, River Tyne, Hull and Goole, Southampton, Weymouth, Plymouth, Bristol, Cardiff, Barry-and-Cadoxton, Swansea, and Liverpool the arrangements, which were highly satisfactory, were "carried out with a devotion to duty on the part of many of the medical officers of health such as must be regarded as having largely contributed to the marked success with which imported cholera was controlled at nearly all English ports during 1893–1894." This tribute on the part of the medical officer of the Local Government Board is well merited. The duties which, during the alarm of cholera, the port medical officers of health were called upon to perform were arduous in the extreme, and they laid strain not only on the tactical capabilities of these officers, but also on their physical endurance. Dr. Barry in his characteristically complete report contributes some interesting general remarks upon the duties of each of the several authorities brought into contact with shipping under the Public Health Acts and the Cholera Orders—i.e., the Customs, Coastguards, and Sanitary Authorities; and he also furnishes numerous carefully prepared maps showing the areas of jurisdiction of the several authorities. The methods adopted in the survey are probably familiar to our readers; it must suffice here to say that they were well calculated to bring the medical inspectors charged with the survey into such relations with the local authorities and their officers as to stimulate the objects in view. Between the beginning and completion of the survey much progress was made, and Dr. Barry tells us that if the ports were now re-inspected many of those wherein the administration used to be defective would have to be removed to a higher class; and, finally, he observes that, "whilst prior to the visits of the Inspectors of the Central Department many Port and Riparian Authorities had in great measure failed to appreciate the responsibilities devolving upon them with regard to either the health of persons on shipboard or to the protection of inland districts from the importation of disease, there was, subsequent to inspection and conference, an enormous improvement in respect to these matters." It certainly seems to us, from the reports of port sanitary medical officers of health, which we have the pleasure of reviewing in our columns from time to time, that the Cholera Survey of 1892 to 1894 has had excellent results, and Dr. Thorne Thorne, Dr. Barry, and the Inspectors engaged on the survey are to be congratulated upon the success of their labours.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; MEETING OF FELLOWS.

A MEETING of Fellows of the College was held on the 2nd inst., the President, Mr. Christopher Heath, being in the chair.

The agenda of the meeting of last July having been taken as read, the President reported that the committee appointed by the Council to receive deputations from the Fellows in reference to the desirability, or otherwise, of applying for a new Charter had received one deputation of Fellows; that the committee had also, by direction of the Council, received a deputation of Members in reference to the same matter; that

the committee had further been instructed by the Council to report upon certain resolutions carried at the annual meeting of Fellows and Members on the 7th ultimo, but that, as one of those resolutions was submitted to the meeting of Fellows to-day for consideration, the committee had thought it desirable to postpone their report to the Council.

The President read the following resolution, carried at the annual meeting of Fellows and Members on Dec. 7th, 1895:—

"That the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council,"

and stated that it had been referred by the Council to the consideration of this meeting of Fellows and was now open for discussion.

Sir Robert Craven moved that the resolution be accepted. He thought that in the interest of peace some concession should be made to the Members to try to put a stop to such unseemly proceedings as those which took place at the late meeting of Fellows and Members.

Mr. Holmes seconded the resolution and considered that it would be accepted as a great concession if Members were admitted to the Council.

Mr. Herbert W. Page then moved as an amendment:—

"That it is desirable to give to the Members of the College direct representation upon the Council, and that for this purpose the number of seats on the Council shall be raised to twenty-eight, of which four shall be filled by eligible Fellows, who shall be elected by the votes of Members only, in such a manner and at such time as the Council may determine."

He pointed out that his amendment differed in some important particulars from the resolution already brought forward. These were, firstly, the number of seats to be added to the Council; he thought that a council of thirty-two would be unwieldy; secondly, he thought that it was undesirable to put Members on the Council, and that if Members were allowed to elect Fellows he considered they would have obtained all they really desired.

Mr. F. J. Gant seconded the amendment and said that he thought it desirable that the College should cultivate closer relations with its constituents.

Sir Robert Craven said he was acquainted with very many Members of the College, and from the opinions he had heard them express he did not think the Members would be satisfied with Mr. Page's amendment.

Mr. Thomas Smith asked if it were definitely known that the Members would consent to be represented by Fellows.

Mr. Tweedy said that he was a member of the committee appointed to receive the deputation from the Members, and that the Members had laid great stress on being represented by Members, and that it was with great difficulty he had prevailed on the deputation to agree to the alteration in the resolution, afterwards carried at the meeting of Fellows and Members, that the representatives of the Members might be either Fellows or Members. This being so, he did not think there was any chance of the Members being satisfied with being represented by Fellows only.

Mr. Gant urged Mr. Page to withdraw his amendment.

Mr. Henry Morris said that three arguments were usually brought forward in favour of the proposed change. These were the arguments from history, law, and expediency. As to the argument derived from history, at no time in the history of this College or its predecessors had the general body of Members had any share in the government of the College. The Council, or what represented it, had always been either self-elective or elected by a very small number of the constituents. The method of election was more democratic now than it had ever been. The legal claim had been tested and had been proved not to exist; and, as to the change being expedient, he could not see it. The election by Members would probably cost £300 or £400, and this could not be afforded in the present state of the finances of the College.

Mr. Spencer suggested that a committee of the Council should be appointed to consider the question.

Mr. Willett asked Mr. Page to omit from his amendment all after the words "upon the Council," for by so doing the house could express its approval of the principle without committing itself to any details.

Mr. Tweedy said that he felt that members of Council should not endeavour to influence the minds of the Fellows, but he urged Mr. Page to adopt the suggestion.

Mr. Page said he was quite willing to omit the latter part of his amendment, and, the original resolution having been withdrawn by consent, the amendment was carried by a large majority.

Mr. Clement Lucas moved:—

"That in the opinion of the Fellows of this College women should be admitted to the diplomas of the College."

remarking that the arguments chiefly employed against admitting women were arguments against their admission to the profession, but that question had already been settled many years ago.

Mr. Norton seconded.

Mr. Gant said he wished to speak from his knowledge of women students, extending over eighteen years, as surgeon at the Royal Free Hospital, where he had always found them earnest in their work.

Dr. Duncan asked whether the Council were able to admit women to the examinations, and having been assured by the chairman that the Council had the power, he said that in India there was a very large demand for qualified women.

Mr. T. Cooke said that he had been much struck with the delicate sense of touch in operating shown by those women students whom he had instructed in operative surgery. He considered them to be very thorough workers.

On being put to the vote, 45 Fellows were in favour of the resolution and 10 opposed to it. It was, therefore, carried.

Mr. Holmes moved:—

"That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee in the case of Mr. R. B. Anderson,"

and Mr. Gant seconded, but the President pointed out that as a quorum of thirty was not present he must declare the meeting closed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6699 births and 4311 deaths were registered during the week ending Jan. 4th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 17·8 to 19·1 per 1000, further rose last week to 20·7. In London the rate was 20·1 per 1000, while it averaged 21·1 in the thirty-two provincial towns. The lowest rates in these towns were 9·7 in Croydon, 13·9 in Norwich, 14·1 in Brighton, 15·2 in Sunderland, and 15·4 in Nottingham; the highest rates were 24·4 in Bristol, 25·1 in Liverpool, 25·4 in Manchester and in Blackburn, 27·6 in Oldham, and 25·9 in Salford. The 4311 deaths included 563 which were referred to the principal zymotic diseases, against 593 and 543 in the two preceding weeks; of these, 193 resulted from measles, 126 from whooping-cough, 99 from diphtheria, 60 from scarlet fever, 46 from diarrhœa, 39 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Swansea, Nottingham, Croydon, Brighton, and Portsmouth, and the highest rates in Wolverhampton, Birmingham, Oldham, Blackburn, and Salford. The greatest mortality from measles occurred in Oldham, Norwich, Birmingham, Burnley, Salford, and Blackburn; from scarlet fever in Gateshead; from whooping-cough in Birkenhead, Bradford, Sheffield, Sunderland, Bolton, and Oldham; and from "fever" in Wolverhampton. The 99 deaths from diphtheria included 66 in London, 9 in Birmingham, and 3 in Halifax. No fatal case of small-pox was registered during the week under notice either in London or in any of the thirty-three large towns. There were 68 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 4th inst., against 89, 82, and 77 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 18, 5, and 12 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2830, against 2800, 2725, and 2798 on the three preceding Saturdays; 320 new cases were admitted during the week, against 329, 210, and 184 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 264 to 318 in the three preceding weeks, was 314 last week, and were as many as 414 below the corrected average. The causes of 92, or 2·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were

duly certified in Bristol, Cardiff, Nottingham, Oldham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceeding weeks from 18·9 to 20·0 per 1000, further rose to 21·0 during the week ending Jan. 4th, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 14·0 in Leith to 23·2 in Glasgow and 26·1 in Greenock. The 614 deaths in these towns included 29 which were referred to whooping-cough, 16 to scarlet fever, 16 to diarrhœa, 10 to measles, 7 to diphtheria, 4 to "fever," and not one to small-pox. In all, 82 deaths resulted from these principal zymotic diseases, against 83 and 77 in the two preceding weeks. These 82 deaths were equal to an annual rate of 2·8 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 23 and 35 in the two preceding weeks, declined again to 29 last week, of which 19 occurred in Glasgow, and 5 in Aberdeen. The deaths referred to scarlet fever, which had been 13 and 9 in the two preceding weeks, rose again to 16 last week, and included 10 in Glasgow, 2 in Dundee, and 2 in Aberdeen. The 10 fatal cases of measles exceeded by 3 the number in the preceding week, and included 5 in Glasgow and 3 in Greenock. The deaths from diphtheria, which had been 11 and 5 in the two preceding weeks, rose again to 7 last week, of which 3 occurred in Edinburgh, 2 in Leith, and 2 in Glasgow. All the 4 fatal cases of "fever" were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 103 and 142 in the two preceding weeks, declined to 135 last week, and were 19 below the number in the corresponding week of last year. The causes of 51, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·1 and 23·3 per 1000 in the two preceding weeks, rose again to 28·8 during the week ending Jan. 4th. During the thirteen weeks of last quarter the death-rate in the city averaged 24·0 per 1000, the rate during the same period being 18·0 in London and 17·2 in Edinburgh. The 193 deaths registered in Dublin during the week under notice showed an increase of 37 upon the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 8 and 3 in the two preceding weeks; of these, 3 resulted from "fever," 2 from whooping-cough, and 2 from scarlet fever, but not one either from small-pox, measles, diphtheria, or diarrhœa. These 7 deaths were equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 3 and 1 in the two preceding weeks, rose again to 3 last week. The mortality both from scarlet fever and from whooping-cough exceeded that recorded in recent weeks. The 193 deaths in Dublin last week included 23 of infants under one year of age, and 47 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons showed a slight decline from the number recorded in the preceding week. Seventeen inquest cases and 18 deaths from violence were registered; and 53, or more than a fourth, of the deaths occurred in public institutions. The causes of 8, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1895.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during December in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 11·5 per 1000 of the estimated population. In the three preceding months the rates had been 12·4, 14·5, and 13·7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, Westminster, Stoke Newington, Strand, Holborn, and Bermondsey; while they showed the largest excess in Chelsea, Hackney, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, Poplar, and Greenwich. The prevalence of small-pox in London showed a slight further decline during December, the 31 cases notified during the month including 11 in Greenwich, 4 in Newington, 3 in Poplar, 2 in Marylebone, 2 in Bethnal Green, and 2 in Lambeth sanitary areas. The Metropolitan Asylum Hospitals contained 75 small-pox patients at the end of December, against 227, 103, and 73 at the end of the three preceding months; the weekly admissions averaged 13, against 27, 15, and 15 in the three preceding months. The prevalence of scarlet fever in London showed a marked decline during December; this disease was proportionally most prevalent in Chelsea, Hackney, Whitechapel, St. George-in-the-East, Poplar, St. Olave Southwark, Rotherhithe, Lambeth, and Lewisham sanitary areas. The Metropolitan Asylum Hospitals contained 2708 scarlet fever patients at the end of December, against 2845, 2727, and 2690 at the end of the three preceding months; the weekly admissions averaged 250, against 333, 263, and 304 in the three preceding months. The prevalence of diphtheria in London during December showed a slight further decline from that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, St. George-in-the-East, Mile End Old Town, Poplar, Greenwich, Lee, and Plumstead. There were 687 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of December, against 664, 661, and 672 at the end of the three preceding months; the weekly admissions averaged 99, against 101, 103, and 98 in the three preceding months. The prevalence of enteric fever in London in December showed a marked decline from that recorded in the preceding month; this disease was proportionally most prevalent in Hampstead, Hackney, City of London, St. George-in-the-East, Mile End Old Town, and Poplar sanitary areas. Erysipelas was proportionally most prevalent in Clerkenwell, Bethnal Green, St. George-in-the-East, and Mile End Old Town sanitary areas. The 19 cases of puerperal fever notified during December in London included 4 in Plumstead, 2 in St. Pancras, 2 in Newington, and 2 in Battersea sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Dec. 28th, the deaths of 5828 persons belonging to London were registered, equal to an annual rate of 17·3 per 1000, against 16·0, 17·5, and 18·2 in the three preceding months. The lowest death-rates during December in the various sanitary areas were 11·1 in St. George Hanover-square, 11·4 in Lee, 11·7 in Wandsworth, 11·8 in Hampstead, Stoke Newington, and Battersea, 12·0 in Paddington, and 13·5 in St. James Westminster; the highest rates were 22·1 in St. Saviour Southwark, 22·6 in Shoreditch, 22·8 in St. George-in-the-East, 23·7 in Whitechapel, 24·7 in Clerkenwell, 24·8 in Newington, 26·0 in Bermondsey, and 26·7 in Holborn. During the four weeks of December 1009 deaths were referred to the principal zymotic diseases in London; of these, 423 resulted from measles, 264 from diphtheria, 119 from whooping-cough, 80 from scarlet fever, 69 from enteric fever, 50 from diarrhœa, 3 from small-pox, and 1 from an ill-defined form of fever. These 1009 deaths were equal to an annual rate of 3·0 per 1000; no deaths from any of these zymotic diseases were recorded in Stoke Newington or in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in Paddington, Limehouse, St. Saviour Southwark, Rotherhithe, and Woolwich; and the highest rates in St. Pancras, Holborn, Clerkenwell, Bethnal Green, St. George Southwark, Newington, and Bermondsey. Three fatal cases of small-pox were registered in London during the month under notice, slightly exceeding the corrected average in the corresponding periods of the ten preceding years; of these 3 deaths, 2 belonged to Greenwich and 1 to Newington sanitary areas. The 423 deaths referred to

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—DECEMBER, 1895.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1895.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	**4,392,346**	**31**	**1854**	**1093**	**—**	**343**	**6**	**19**	**520**	**—**	**3866**	**11·5**	**3**	**423**	**80**	**264**	**119**	**—**	**69**	**1**	**50**	**1009**	**3·0**	**5828**	**17·3**	**152**
West Districts.																										
Paddington	122,756	1	39	13	—	2	—	—	7	—	62	6·6	—	—	1	2	3	—	1	—	1	8	0·8	113	12·0	138
Kensington	167,671	—	67	31	—	10	—	—	31	—	139	10·8	—	4	6	7	6	—	—	—	1	24	1·9	179	13·9	187
Hammersmith	108,429	—	36	15	—	4	—	—	7	—	62	7·5	—	10	1	3	10	—	1	—	2	27	3·2	127	15·3	163
Fulham	117,745	—	22	47	—	3	—	1	10	—	83	9·2	—	8	—	10	5	—	1	—	—	24	2·7	130	14·4	163
Chelsea	99,930	—	54	38	—	6	—	—	14	—	112	14·6	—	1	4	9	7	—	1	—	2	24	3·1	123	16·0	122
St. George Hanover-square	74,037	—	38	11	—	5	—	—	6	—	60	10·6	—	1	1	3	4	—	3	—	2	14	2·5	83	11·1	107
Westminster	54,003	—	7	12	—	4	—	—	4	—	27	6·5	—	6	—	4	3	—	1	—	1	15	3·6	87	21·0	151
St. James Westminster	23,149	—	14	6	—	2	—	—	2	—	24	13·5	—	—	—	—	1	—	1	—	—	2	1·1	24	13·5	235
North Districts.																										
Maryiebone	137,392	2	39	23	—	11	—	—	20	—	95	9·0	—	9	2	6	4	—	2	—	2	25	2·4	208	19·7	137
Hampstead	77,592	—	29	6	—	9	—	—	6	—	50	8·4	—	4	1	2	—	—	—	—	—	8	1·3	70	11·8	123
St. Pancras	233,543	—	65	41	—	14	—	2	23	—	145	8·1	—	57	3	9	—	—	5	1	3	77	4·3	370	20·7	167
Islington	335,929	—	145	78	—	28	1	1	26	—	279	10·8	—	30	4	27	6	—	6	—	4	77	3·0	404	15·7	145
Stoke Newington	35,234	—	7	5	—	2	—	—	4	—	18	6·7	—	—	—	—	—	—	—	—	—	—	—	32	11·8	128
Hackney	215,623	—	127	66	—	24	—	1	25	—	243	14·7	—	11	4	18	6	—	8	—	2	49	3·0	274	16·6	149
Central Districts.																										
St. Giles	37,654	—	14	4	—	3	—	1	5	—	27	9·3	—	3	—	1	1	—	—	—	1	6	2·1	59	20·4	274
St. Martin-in-the-Fields	13,536	—	7	—	—	1	—	—	2	—	10	9·6	—	—	—	—	—	—	—	—	—	—	—	15	14·5	231
Strand	22,586	—	6	1	—	2	—	—	2	—	11	6·3	—	4	—	2	—	—	1	—	—	7	4·0	33	19·2	229
Holborn	32,188	—	6	4	—	2	—	—	5	—	17	6·9	—	12	2	1	3	—	—	—	—	18	7·3	66	26·7	229
Clerkenwell	65,036	—	29	16	—	6	—	—	13	—	64	12·8	—	24	3	9	—	—	—	—	—	36	7·2	123	24·7	119
St. Luke	40,762	—	7	11	—	1	—	—	4	—	23	7·4	—	1	—	1	1	—	—	—	1	4	1·3	61	19·5	174
City of London	33,824	—	15	2	—	4	—	—	5	—	26	10·0	—	2	—	1	—	—	—	—	—	3	1·2	47	18·1	154
East Districts.																										
Shoreditch	122,932	—	47	23	—	10	1	1	14	—	96	10·2	—	7	3	5	8	—	3	—	1	27	2·9	213	22·6	211
Bethnal Green	130,061	2	65	40	—	7	—	—	26	—	140	14·0	—	29	1	8	6	—	2	—	3	49	4·9	210	21·0	166
Whitechapel	75,820	1	50	24	—	4	—	—	10	—	89	15·3	—	1	7	11	2	—	1	—	1	24	4·1	138	23·7	166
St. George-in-the-East	45,227	—	32	21	—	5	1	—	10	—	69	19·9	—	—	2	2	—	—	—	—	2	7	2·0	79	22·8	214
Limehouse	56,885	1	25	5	—	3	—	—	5	—	39	8·9	—	1	—	2	—	—	1	—	1	4	0·9	70	16·0	98
Mile End Old Town	108,443	1	53	56	—	14	—	1	26	—	150	18·0	—	3	3	13	5	—	4	—	—	28	3·4	160	19·2	125
Poplar	171,230	3	115	88	—	21	1	1	33	—	262	20·0	—	2	7	13	8	—	4	—	—	34	2·6	241	18·4	182
South Districts.																										
St. Saviour Southwark	26,570	1	7	3	—	2	—	—	2	—	15	7·4	—	11	1	2	—	—	—	—	1	14	0·7	45	22·1	81
St. George Southwark	60,168	1	21	7	—	5	—	—	6	—	40	8·7	—	12	1	3	3	—	—	—	1	20	4·3	99	21·4	158
Newington	119,358	4	53	16	—	5	—	2	19	—	99	10·8	1	41	—	3	4	—	—	—	2	51	5·6	227	24·8	234
St. Olave Southwark	13,065	—	7	—	—	—	—	—	—	—	7	7·0	—	—	—	—	1	—	—	—	1	3	3·0	22	22·0	259
Bermondsey	83,861	—	23	7	—	6	—	—	7	—	43	6·7	—	41	—	4	—	—	3	—	—	48	7·5	167	26·0	156
Rotherhithe	40,713	—	22	5	—	—	—	—	5	—	33	10·6	—	1	1	—	—	—	—	—	—	2	0·6	46	14·7	151
Lambeth	284,883	2	163	60	—	29	1	—	29	—	284	13·0	—	35	6	12	1	—	5	—	4	63	2·9	362	16·6	112
Battersea	165,130	—	77	37	—	15	—	2	23	—	157	12·4	—	3	2	11	1	—	4	3	1	23	1·8	149	11·8	118
Wandsworth	185,956	—	73	26	—	14	1	—	10	—	124	8·7	—	—	1	5	4	—	1	—	1	14	1·0	167	11·7	147
Camberwell	252,737	—	84	91	—	26	—	—	30	—	231	11·9	—	33	1	8	11	—	4	1	6	79	4·1	335	17·3	169
Greenwich	175,183	11	73	81	—	19	—	—	25	—	209	15·6	2	12	—	3	3	—	1	—	2	46	3·4	254	18·9	162
Lewisham (excluding Penge)	82,410	—	44	22	—	7	—	—	8	—	81	12·8	—	—	1	—	4	—	—	—	—	7	1·1	86	13·6	132
Woolwich	42,768	—	14	9	—	—	—	1	4	—	28	8·5	—	1	—	1	2	—	—	—	—	3	0·9	52	15·9	122
Lee	38,832	—	17	15	—	3	—	1	6	—	41	13·8	—	2	—	—	1	—	1	—	—	6	2·0	34	11·4	140
Plumstead	61,494	—	16	27	—	2	—	4	2	—	51	10·8	—	1	—	1	—	—	—	—	—	9	1·9	64	13·6	88
Port of London	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 40 cases of membranous croup.

† Including deaths from membranous croup.

measles exceeded the corrected average number by 144; among the various sanitary areas this disease showed the highest proportional fatality in St. Pancras, Holborn, Clerkenwell, Bethnal Green, St. Saviour Southwark, Newington, and Bermondsey. The 80 fatal cases of scarlet fever were 13 below the corrected average; this disease showed the highest proportional fatality in Clerkenwell, Whitechapel, and Poplar sanitary areas. The 264 deaths referred to diphtheria were 106 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Chelsea, Islington, Hackney, Strand, Clerkenwell, Whitechapel, Mile End Old Town, Greenwich, and Plumstead. The 119 fatal cases of whooping-cough were little more than half the corrected average number; this disease showed the highest proportional fatality in Hammersmith, Holborn, and Shoreditch sanitary areas. The 69 deaths referred to enteric fever almost corresponded with the corrected average number; among the various sanitary areas the highest proportional fatality of enteric fever was recorded in St. George Hanover-square, Hackney, Mile End Old Town, and Bermondsey. The 50 fatal cases of diarrhœa were within 7 of the corrected average number. In conclusion, it may be stated that the mortality in London during December from these principal zymotic diseases was nearly 15 per cent. above the average.

Infant mortality in London during December, measured by the proportion of deaths under one year of age to registered births, was equal to 152 per 1000, and was slightly below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, Limehouse, St. Saviour Southwark, Lambeth, Battersea, and Plumstead; and the highest rates in St. James Westminster, St. Giles, St. Martin-in-the-Fields, Strand, Holborn, Newington, and St. Olave Southwark.

* Including 40 cases of membranous croup.

† Including deaths from membranous croup.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

SURGEON-MAJORS BARRINGTON and MACONACHIE have been posted to the Western District. The following officers have arrived from India:—Brigade-Surgeon-Lieutenant-Colonel Macrobin and Surgeon-Majors Johnston, Emerson, and Poynder, and Surgeon-Captain Stables. Surgeon-Major Allport and Surgeon-Captain Perry have arrived from Ceylon.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel James Henry Reynolds, M.B., V.C., retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain W. E. Jennings (Bombay) are placed temporarily at the disposal of the Government of Bombay. Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson is reappointed to be Sanitary Commissioner, North-West Provinces and Oudh, vice Surgeon-Major S. J. Thomson (Bengal), who has reverted to his substantive appointment of Deputy Sanitary Commissioner of the North-West Provinces and Oudh. Surgeon-Lieutenant-Colonel Russick Lall Dutt, Officiating Professor of Materia Medica and Clinical Medicine, Medical College, Calcutta, and *ex-officio* Second Physician, Medical College Hospital, is appointed to act as Civil Surgeon of Burdwan until further orders, from date on which he assumed charge. Surgeon-Major Kerin, A.M.S., on arrival from England, is posted to the Mhow District. Surgeon-Lieutenant Tylor, A.M.S., on arrival from England, is posted to the Bombay District, temporarily. Surgeon-Colonel H. S. Muir, M.D., A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Colonel W. D. Wilson, A.M.S., who has reverted to the Home Establishment. Brigade-Surgeon-Lieutenant-Colonel R. C. Eaton, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel (temporary Surgeon-Major-General) T. Maunsell, appointed to officiate as Principal Medical Officer, Bengal Command.

NAVAL MEDICAL SERVICE.

The following officers have been appointed to serve on the flying squadron, consisting of *Revenge*, *Royal Oak*, *Gibraltar*, *Theseus*, *Charybdis*, and *Hermione*, commissioning for immediate service:—Fleet-Surgeons: J. C. B. Maclean to the *Revenge*, and H. A. W. Richardson to the *Royal Oak*. Staff-Surgeons: E. H. Williams to the *Gibraltar*, C. F. Newland to the *Theseus*, C. W. Sharples to the *Charybdis*, and D. T. Hoskyn to the *Hermione*. Surgeons: C. J. S. Kelsall to the *Revenge*, S. H. Birt to the *Royal Oak*, G. Sichel to the *Gibraltar*, and A. A. J. McNabb to the *Theseus* (all to date Jan. 14th).

VOLUNTEER CORPS.

Engineer: Fortress and Railway Forces (Royal Engineers): 1st Devonshire and Somersetshire: Hugh Peter Victor Wiggin, gent., to be Surgeon-Lieutenant. *Rifle:* 2nd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Captain M. Taylor resigns his commission. 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment): Ernest James Gibson Berkley, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Buffs (East Kent Regiment): Alan Murdoch, gent., to be Surgeon-Lieutenant. 2nd Westmoreland Volunteer Battalion the Border Regiment: Surgeon-Lieutenant W. B. Cockill to be Surgeon-Captain. 3rd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant F. W. Evans, M.D., resigns his commission. 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Richard Arnold Johnston, gent., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: William Gill, gent., to be Surgeon-Lieutenant.

DEATHS IN THE SERVICES.

Inspector-General of Hospitals, George Cuninghame Meikleham, retired, M.D., A.M.D., at Southsea, on Jan. 1st. He served with the 51st Light Infantry during the war in Burma in 1852; was on board the East India Company's steam sloop *Sesostris* during the storming of Rangoon (medal with clasp for Pegu); joined the Army in the Crimea in March, 1854, served in Turkey after the end of the war, and was present at the siege of Sebastopol and assault of the Redan (medal with clasp and Turkish medal); served with the 70th Regiment during the war in New Zealand in 1863 (medal and clasp); and in the Abyssinian expedition in 1867–68 (medal). He joined the Army in 1843, became Surgeon in 1854, Surgeon-Major in 1863, Deputy-Inspector-General in 1870, and retired with the honorary rank of Inspector-General in the latter part of the same year.

Surgeon-Captain H. S. Wood, I.M.S., has passed the examination in Parvatiya, and Surgeon-Captain R. K. Mitter, I.M.S., has passed the Higher Standard Examination in Persian.

On Jan. 4th forty-two invalids were admitted to the Royal Victoria Hospital, Netley, ex ss. *Britannia*, from India.

Correspondence.

"Audi alteram partem."

THE CASE OF MRS. EVANS.

To the Editors of THE LANCET.

SIRS,—Undoubtedly your attention has been called to the reports in various daily papers headed "A Medical Man Censured," and as the reports seem to compromise on my action I should, with your permission, desire to place the circumstances as concisely as possible before my medical brethren. Some facts have already been placed, though somewhat briefly, before the general public, but it will be necessary to go more closely into details in your esteemed paper.

In response to a note addressed to me by the late Mrs. Evans I visited her at ten o'clock on Thursday night. The note did not contain any indication of the object of her request. I found her, however, in bed. My examination revealed an emphysematous condition of lung. When I examined with the stethoscope I discovered considerable cardiac debility; there was no murmur, but the sounds were somewhat muffled; there was absence of any friction sounds. The symptoms, however, did not call for urgent treatment, but on Friday morning I sent her a preparation containing strychnine and gentian. I visited her again on Friday night, and found a slight thrill, but on percussing the cardiac area I could detect no dulness. There were no friction sounds, but

I feared I had to deal with a case of masked pericarditis. I, however, thought that the nervous system might be implicated, and on examining the knee reflexes they were found to be exaggerated. Sensation under the usual tests was only very slightly impaired. I could find no indication of paralysis. Up to this point it will be seen that there was no opportunity of examining the urine, even if the symptoms had pointed in the direction of the kidneys. Moreover, I had every reason to believe at the moment that a very complete examination of the urine had recently been made, and at the bedside I remarked, "We may assume then that the water is right." As the patient had suffered severely from sleeplessness it was decided to administer what I considered under the circumstances to be the safest hypnotic—viz., sulphonal. I sent two sulphonal powders containing 25 grains each, addressed to the husband, Mr. F. C. Evans. On the outside of the ordinary square envelope in which they were enclosed I wrote his name and address and "Sulphonal pulv. II. aa. gr. 25." I could not ascertain when they were administered, but the drug should have been given on Friday evening.

On Saturday evening I saw her at 9.45. She was in a semi-comatose condition, and the temperature at this time was 99·4°F. There were stertorous breathing and marked contraction of the pupils. The breathing was fairly regular, though laboured. The patient seemed to me to be under the influence of a preparation containing an opiate, and I treated her on that assumption with the usual means, having remarked that the patient had had an "opiate." She regained consciousness, and I was astonished to hear her say, "Don't let the children know I have done it." Considering the urgency over I did not press for an explanation. A message was sent from my surgery asking me to return. I then left the patient, the husband suggesting that he could "manage." On Sunday morning I received no message, but I sent to inquire. In response I received the following letter:—

"DEAR BUTLER,—My wife rallied after you left and spoke quite sensibly to me. She sat up in bed at 1 A.M. and said she was much better. I lay down at her request then and woke several times during the night, when she seemed quite herself again and expressed herself sorry for having been the cause of so much trouble. When I awoke at 9 A.M. she had again become unconscious and remains so now. I have injected ether twice, one drachm each time, but she does not even feel the needle. I could not give her any coffee, though I made some, as she could not swallow. Bathing the face has no effect. She is almost pulseless. I can hardly count the number, but think it is about 130 per minute. Do not trouble to come if busy; I am doing all I can.

"Thanks for inquiry,

"F. C. E."

Being somewhat astonished at the condition—and especially as a pulse of 130 was totally inconsistent with sulphonal—I visited the patient in spite of the letter, and she died in the afternoon at 1.30. I did not feel justified in writing a certificate without further consultation. The husband and I drew up a statement of facts and laid them before Dr. George Robertson, whose judgment on this bare statement was that the certificate might be granted, stating that death was due to—anæmia, six months; influenza, four days. To this at the moment I felt bound to submit, but insisted to the husband in a private interview (there and then) that I should have to explain my seeming dissent more fully to Dr. Robertson. I subsequently did so, and he advised to let the matter rest. Next day I wrote the following letter, which I personally delivered at his house:—

38, Carlton-vale, N.W., Dec. 24th, 1895.

DEAR DR. ROBERTSON,—I am decided. In the event of a voluntary examination, do you agree to be present? The result might prove my fears to be groundless. No narcotic; no publicity. To avoid anything of that kind I will go any length consistent with honour, and I shall be thankful for any suggestion towards sparing poor Evans's feeling as much as may be.

Yours sincerely,

G. R. BUTLER.

That evening I communicated with the coroner, and on the following day he decided to hold an inquest. This he did on Saturday last. The death was there described in highly scientific terms as due to "stoppage of the heart's action," and I was ordered to be "severely censured." Dr. Gordon Hogg accordingly severely admonished me "for prescribing a dose of sulphonal without first making a proper examination" and for "carelessness." These are the circumstances, and I have no doubt they will be helpful to many of my professional brethren. I may, however, add that the patient had had for a long period of time a fear of impending death and other morbid ideas. Regarding the dose of sulphonal, I scarcely need say that twenty-five grains would do very little harm under any circumstances when properly administered. In the *Archives für Experimentelle Pathologie und Pharmacie, Leipzig*, vol. xxxi., No. 1, Kast gives the symptoms of poisoning by sulphonal as vomiting, diarrhœa, nervous and urinary phenomena, and states that it is generally admitted that doses of thirty-one to thirty-six grains may be safely administered. Given within those limits he describes it as a "harmless medicament." The cases of poisoning by sulphonal have always occurred after prolonged use of the drug in enormous doses. Schaumann insists that it is preferred to chloral hydrate, because it has no injurious effect upon the heart and vessels. Schedtler has published forty-one cases of female patients to whom doses of thirty-one grains have been given for prolonged periods without any untoward symptoms, and forty-six grains have been very often necessary especially in "melancholia with anxiety." It is not enlightening to hear a jury of tradesmen discussing the therapeutics of sulphonal; but it seemed to me deplorable that the police surgeon, who officiated in place of an expert, should betray so much unfamiliarity with so common a drug as to insist that five grains might be a dangerous dose. Such a statement is perfectly absurd under any circumstances, and a medical man has a right to expect that a medical coroner should be able of his own knowledge to defend a brother practitioner from such assertions. I challenge his accuracy. Dr. Hogg knows perfectly well (if he knows the literature) that twenty-five grains of sulphonal is a non-toxic dose. The symptoms were not those produced by sulphonal, and he did not take pains to inform the jury of the nature of the contents of the stomach before he accepted their verdict. The verdict of "Died through the visitation of God," which the old legal coroners gave, does not excite more contempt in the minds of practitioners than that of Dr. Hogg's jury of "Death from stoppage of the heart."

I have to complain that I was not permitted to be present to hear Mr. Evans's evidence. One would have thought that the coroner would have been pleased to have my assistance. How could he expect it if I did not hear the whole of the evidence? The circumstances appear to me to indicate that medical men are not safe from "public censure" or even public insult, although using every endeavour to exercise their calling with the honour which is its due. In this case I have been compelled to go into the forum and attempt the impossible task of explaining the matter *coram populo*.

I am, Sirs, yours faithfully,

Carlton-vale, N.W., Jan. 1st, 1896. GEORGE R. BUTLER.

*** Assuming that the above letter fully represents the facts of the case, we are of opinion that the sulphonal (gr. xxv.) had nothing to do with causing the death. Considering that our correspondent assumed that an opiate had been taken, and especially after the alleged statement of the deceased, we think he would have acted wisely in declining to entertain the question of giving a death certificate without first having informed the coroner. As regards the circumstances related as having occurred at the inquest, we think Mr. Butler was not dealt with too generously.—ED. L.

"PARACENTESIS OF THE THECA SPINALIS."

To the Editors of THE LANCET.

SIRS,—*Apropos* of Professor Quincke's paper, read before the Association of German Naturalists and Medical Men, on "Paracentesis of the Spinal Theca," in which he says that failure to secure a flow of fluid is to be attributed to imperfect performance of the puncture—e.g., the passage of the needle between the nerve roots outside the sheath or the presence of thick pus which will not flow through a too fine needle—Professor Fürbinger writes, in an article in the *Deutsche Medicinische Wochenschrift* of Nov. 7th, 1895, in reply to a remark of Professor Ewald, who had several times observed that the puncture produced no fluid although it had penetrated into the spinal theca, the following:—

"I observed in the concluding remarks of my paper, read before the Berlin Medical Society, on 'Clinical Importance of Spinal Puncture,' that I frequently had the same experience as Ewald. I had succeeded in drawing hardly any liquid, without the needle having passed the surface of the dura. I consider these facts as pathological, because the average corresponds to a considerable quantity of cerebro-spinal fluid in the lumbar sac. These statements have not,

however, prevented Quincke, in the meeting of naturalists and medical men, from observing: 'The failure regarding the negative result of the puncture, such as Fürbringer describes, may be attributed to technical errors.' I do not know whether the speaker entirely meant this, as I observe that the sentence is missing in the original publication, which has just appeared. It remains, however, uncontradicted in various medical papers, which fact justifies my going into the matter thoroughly, and trying to find out with what right such a reproach is made. That can hardly be done by the way of theoretic reasoning, but a hard matter-of-fact basis in the form of a post-mortem discovery is necessary in such 'negative' cases, an expression, perhaps, more concise than absolutely correct. Only direct inspection of the cerebro-spinal sac can give a certain answer to the question whether technical errors have been avoided or whether the needle really 'slipped to the side' or between the roots of the 'nerves,' or whether it was 'too short' or 'too thin.' I am able to answer this question, as I—quite contrary to my usual custom—in April last performed lumbar puncture fourteen times on a child with negative results, and the pathological anatomist showed me, *ad oculos*, why I had produced no fluid during life. The case (although by no means unique in my own experience, and for experienced pathological anatomists not especially rare) is of great interest and of importance in the question we are discussing; I therefore give a short *résumé* of it.

"The patient, a child aged five months and a half, had, according to the statement made by the parents, five weeks before he was brought to the Friedrichshain Hospital on April 8th, 1895, received a violent blow on his head. Five days before admission to the hospital vomiting had occurred, and since then fever and convulsions. The last two days the child had taken no nourishment. The parents were healthy. On examination the child was found to be in a good state of nourishment, but suffering from fever and torpor. There was decided opisthotonos. The face bore an expression of pain when the head was moved. The arms were held forward. When touched the child screamed. The body was much swollen. The large fontanelle was decidedly prominent and much stretched. Partly because of the last-mentioned fact, and partly because the diagnosis wavered between tuberculosis and purulent meningitis, I at once applied spinal puncture, and in spite of the hopeless nature of the case performed the operation eight times at different parts of the lumbar spine. Although I had not the remotest doubt that the needle was free in the lumbar sac I did not succeed in procuring one drop of cerebro-spinal fluid, not even after I had (against my principle) applied aspiration. The temperature became almost normal, otherwise the patient remained in the same state. In the night the temperature rose again. Next morning I again tried lumbar puncture. In spite of six injections only a drop of blood was discharged, but no other fluid. On April 9th the patient died.

"The result of the necropsy made the following day by Dr. Hansemann was as follows. The lymphatic gland, as in the root of the lungs as far as the jugulum, had become caseous; the lungs, spleen, liver, and mesenteric glands were permeated with numerous, mostly fresh, tubercles. Regarding the state of the brain and spine I quote Hansemann's *dictat* word for word: 'The front fontanelle was much extended. On opening the brain a large quantity of clear fluid was discharged, which proceeded solely from the ventricles, while the gyri were much flattened on the surface and the pia firmly attached. The whole of the base is converted into a gelatinous yellowish-white œdematous mass permeated with numerous tubercles. This gelatinous mass extends along the spine, on the posterior as well as the anterior surface, so that the dura is much stretched, not from the liquid but from this œdematous, spongy mass, which is here, as at the base of the brain, permeated with submiliary tubercles. Loose, flat blood coagula lie on this mass between it and the dura, chiefly at the cauda equina, and extend over the lumbar swelling, where they are all confluent; higher up, however, they again become scanty and decrease in size as they approach the cervical spinal cord.' I add to the above statement that, as far as recognisable, all the punctures in the lumbar region—I naturally only punctured in this region—perforated the dura mater, and that there was no sign of any damage to the nerve roots of the cauda. The lumbar punctures did not, therefore, as this precise anatomical inquiry proved, fail because the needle slipped to the side, also not because it was too long or too short; finally, also not because it penetrated into the nerve roots or the spine, but simply because, by reason of the morbid alterations, no fluid existed. A 'technical error' had never been suggested. It seems to be worthy of notice in Lenhartz's above-mentioned statement in the discussion of Quincke's paper that out of fifteen cases where he had performed puncture the majority were without result, although the needle was doubtless in the vertebral canal, and, further, Von Ziemssen's observation that it is surprising to find with uræmia only a few drops of fluid in the cerebro-spinal sac in spite of the high pressure. I must observe that out of my three or four 'quite negative' cases one patient suffered from uræmia. Anatomical investigation was unfortunately not possible in any of these cases. In two of the cases, where basal meningitis existed, I suspected similar complications as in the above-described case. Finally, I must not omit to mention that the post-mortem examination of a uræmic patient, in whom lumbar puncture had only produced a few drops of cerebro-spinal fluid, revealed the same in 'vanishing quantity' in the region of the spinal sac. Thus in this case also the illness, and not the physician, was responsible for the failure of the puncture. I shall, therefore, continue in further 'negative' cases—naturally not without careful examination in spite of my ever-increasing practice—to exclude the possibility of technical errors on my part, but my next step will be to consider the opinion I expressed seven months ago as corresponding to the pathological state. It is possible that lumbar puncture may be considered in this direction from a new point of view, rather scientific or diagnostic than practical or therapeutic. With regard to the latter, I refer to later reports of my experiences. I recognise with pleasure the unexpectedly favourable opinion which Quincke and Von Ziemssen have given on the therapeutic value of the method, and which spurs me on to bring lumbar puncture (latterly somewhat neglected) in my wards to a state of perfection."

I am, Sirs, yours truly,

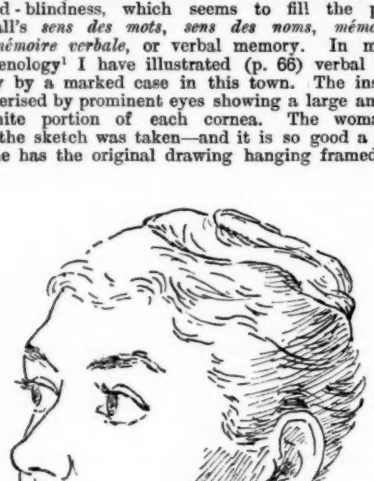
Baden-Baden, Dec. 1895. W. H. GILBERT, M.D.

"WORD-BLINDNESS AND VISUAL MEMORY."

To the Editors of THE LANCET.

SIRS,—The article by Dr. James Hinshelwood in THE LANCET of Dec. 21st, 1895, is one of the most, if I may be allowed to say so, interesting and instructive papers which has appeared in THE LANCET for many a long day—aye, and for many a short one too. The article has a special interest for me because Dr. Hinshelwood mentions, besides word-blindness—(1) "visual memory for places"; (2) and (3) "visual memory for form and colour"; and (4) "visual memory for figures," each having localised cortical centres in the brain; for, as Dr. Hinshelwood states, "there exist partial, special, or local memories, each of which has its own special domain." Now phrenology, which has been a pet subject with me for many years, and on which I have written a small book, has conditions showing all these four memories. 1. "Visual memory for places" is locality in phrenology. Dr. Gall, the originator of the study, noticed, when he was a boy at school, that one of his schoolfellows, although of moderate abilities, could always find the trees in which they had set snares for birds without the slightest hesitation, whereas he had the greatest difficulty in discovering those they had marked. Later in life Dr. Gall, putting a plaster cast of this boy's head side by side with casts of men who had the gift of finding without any difficulty places they had once seen, was able to satisfy himself that locality was marked by an enlargement above the eyes on each side of the root of the nose. Dr. Gall termed the instinct *sens des localités, sens des rapports de l'espace.* (2) "Visual memory for form and (3) colour" Dr Gall termed *mémoire des personnes, sens des personnes, sens des rapports des couleurs.* He placed the former enlargements on the inner sides of the superciliary ridges, and No. 3 in the outer parts of the ridges, in close approximation to No. 4. In connexion with (4)—"visual memory for figures" (*sens des rapports des nombres*)—Dr. Hinshelwood mentions the "calculating" men of the present day, MM. Inaudi and Diamandi. In the early part of this year I interviewed M. Inaudi in Paris at the Hôtel St. Pétersbourg, at the time he was exhibiting at the music-hall Olympia. He told me that his extraordinary memory for figures, is, as Dr. Hinshelwood states is in the

case of Diamandi, from his mental picture of the figures—a visual memory. Besides these four visual memories there is word-blindness, which seems to fill the place of Dr. Gall's *sens des mots*, *sens des noms*, *mémoire des mots*, *mémoire verbale*, or verbal memory. In my book on Phrenology[1] I have illustrated (p. 66) verbal (visual) memory by a marked case in this town. The instinct is characterised by prominent eyes showing a large amount of the white portion of each cornea. The woman from whom the sketch was taken—and it is so good a likeness that she has the original drawing hanging framed in her



room—has an exceedingly good memory for what she has read. She can repeat word for word, she and her husband have told me, anything she has read once in a newspaper. She tells me that she cannot account for her extraordinary memory—that, when repeating, she does not see the printed words before her.

It will be noticed that the phrenological enlargements for (1) locality, (2) form, (3) colour, and (4) number have all been located in close connexion with the eyes; that (5) verbal memory is a condition of the eyes themselves; and, further, that Dr. Gall located them long before these visual memories, each having "its own special domain" in the brain, were thought to exist. I am, Sirs, yours faithfully,

Canterbury, Dec. 27th, 1895. PUGIN THORNTON.

DOUBLE CEREBRAL ABSCESS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 2nd, 1889, you published for me a case of convulsions with increasing coma in a boy aged fourteen, with a history of a kick from a horse three years previously, leaving a scar on the forehead, through which I trephined and drained a large old-standing abscess in the left frontal lobe with almost entire relief of symptoms and every promise of complete success until the fifth day, when coma again supervened, followed by death. Post mortem a second old thick-walled abscess (two ounces) was found in the *opposite temporo-sphenoidal lobe*, of the existence of which there had been no hint during life, no middle-ear disease being found post mortem. This quite unsuspected abscess was difficult to account for, the only possible origin seeming to be a contrecoup at the time of the original injury. I did not hazard this unsatisfactory explanation of the pathology of the case and was disappointed in any hopes of enlightenment from your correspondents, but the point which seemed to make the case worthy of record was the existence of two quiescent and unrecognised cerebral abscesses, of which the second produced no symptoms until the brain was disturbed by the operation on the first, a condition which I thought might explain other cases where the draining of a cerebral abscess was followed by an unfavourable result, or where fatal coma occurred unexpectedly in various cerebral derangements. Now I see recorded in the current *St. Thomas's Hospital Gazette* a case in which Mr. Anderson drained in the usual way a cerebral abscess following mastoid disease, with complete relief of symptoms, even to the clearing up of optic neuritis, but ending in fatal coma in the second week, and at the necropsy there was found an inch deeper than the first abscess cavity—which was undergoing a perfect process of cure—a second old thick-walled abscess, unsuspected during life and presumably the cause of death. In both cases, it will be noticed, there was no question of the second abscess being of pyæmic or embolic origin. They are both cases proving to be double cerebral abscess, in which the discovery of one abscess fully accounted for all symptoms, the second being unthought of. May I once more, through your columns, draw attention to this point, surely one of sufficient practical importance, and on which I shall be glad of the opinion of those better qualified than myself to speak?

I am, Sirs, yours truly,

Bromsgrove, Dec. 26th, 1895. CAMERON KIDD.

[1] Heads and What They Tell Us. Sampson Low, Marston & Co., London.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—Some time back I was called upon and asked to take charge of a medical society about to be started in the town where I lived; the names of men in good practice in my neighbourhood were mentioned as of those holding similar appointments. I had no knowledge of the working of the society and was too busy at the time to go into it, and therefore consented. Lately, my attention being drawn in the medical papers to the abuses introduced by medical aid societies, and the way in which they degrade medical service and those who render it, I determined to give three months' notice and sever all connexion with them. My time expires at the end of this year, but already my place is filled up by a new arrival. What has been the use of my resignation? I only help another to oppose me, which in a small place is unfortunate. Until some concerted action is taken we are powerless; the profession is so flooded, there will always be found some only too ready to take the smallest chance that offers of commencing practice. I am, Sirs, yours faithfully,

December, 1895. DISGUSTED.

A CRITICISM OF THE RECENT SURGICAL TREATMENT OF MALIGNANT DISEASE OF THE BREAST.

To the Editors of THE LANCET.

SIRS,—The "disappointing results" of the surgical treatment of malignant disease of the breast are not wholly accounted for by the intimate connexion of the lymphatics of the breast and neck which Dr. Robert Sanderson describes in THE LANCET of Dec. 21st, 1895. His reminder that the lymphatics freely cross over the clavicle from the breast to the neck and also enter the posterior triangle through the axillary apex is a wholesome one for operative surgeons. But, according to the anatomical investigations of Stiles of Edinburgh and others, lymphatic vessels also dip down into the pectoral fascia and muscles, course along the intercostal spaces, and enter the thorax to join the mediastinal glands, while others run in the suspensory ligament across the sternum to join the lymphatic system of the opposite breast. Upon the theory of local origin and subsequent infection of the neighbouring lymphatic glands wide and extensive operation is clearly indicated. Sir Benjamin Brodie used to leave cases alone when the axillary glands were affected. Sir Joseph Lister advised removal of the enlarged glands along with the breast. Mr. Banks tells us that an imperfect operation leaves a patient in a worse plight than if she had been left alone, and advises a "clean sweep" of both breast and axilla, whether the glands be obviously affected or not. Yet it is still questionable whether the general recognition of the intimate connexion of the lymphatics of the breast with all the neighbouring glands

has been of practical benefit. In former times it was quite exceptional to find the results of cancer surgery so fully reported that we can show them to have been disappointing by exact statistical records; yet no one doubts that they were bad, and the increasing severity of modern operations is based upon our conviction of the worthlessness of the earlier surgical procedure. In the present day there is much greater operative activity; yet there is the same lack of statistics. Quite recently Mr. Arbuthnot Lane[1] of Guy's Hospital published "A Case illustrating a very Effectual Method of treating Extensive Malignant Disease of the Breast" from a single woman aged twenty-nine, who had developed carcinoma of the right breast only five months previously. He removed the middle third of the clavicle, tied the subclavian artery and vein, and made a clean sweep of the subclavian triangle, though its glands were not obviously affected. Then he made an incision nine inches in length along the middle line of the sternum and extended the incision at what seemed a safe distance from the growth to the posterior fold of the axilla, and thence to the outer end of the clavicle. In order to cover this enormous wound, more than nine inches in diameter, he made a large and sufficient flap from the skin over the deltoid. Next, he amputated the arm at the shoulder-joint, and, lastly, he dissected all the soft parts from the sternum, clavicle, ribs, cartilages, intercostal muscles, serratus magnus, and posterior wall of the axilla. No one has commented upon an operation of such novel magnitude except Mr. Rutherford Morison of Newcastle-on-Tyne, who, it appears,[2] had forestalled Mr. Lane upon two occasions. It is the logical outcome of our increased knowledge of the lymphatic anatomy of the breast, and now that a lead has been given it is likely to be followed more or less extensively. Comment, therefore, is almost obligatory. In Mr. Lane's patient the new growth was found to involve the greater pectoral muscle—a common occurrence, and one which absolutely prevents assurance of complete eradication of the disease, for it is impossible to remove the mediastinal glands which drain the pectoral muscles. It might be argued that as the mediastinal glands had to be left the glands of the neck, which were not obviously diseased, might as well have been left also; but the practical answer is that one must do what one can. There are, however, no statistics to show the results of the recent surgical treatment of cancer of the breast. The operations have increased in severity, but there is a suspicion that the results in prolongation of life are no better. It would, perhaps, be invidious to refer particularly to the many papers upon cancer surgery which have appeared during the past decade. Availing myself of the meagre statistics to hand, I endeavoured to show, in a paper which I lately read before the Liverpool Medical Institution, that we possess no evidence such as would convince men of ordinary business capacity that life is prolonged by the numerous and heroic operations which are now performed upon patients with cancer of the breast, uterus, or alimentary canal. Events clearly show that malignant disease is constitutional, yet we act as if it had been conclusively proved to be a mere local affection. Sir James Paget has said that cancer of the breast does not fail to return after amputation more than once in 500 cases. Of course, as Mr. Bryant has recently pointed out, simple cysts of the breast are sometimes mistaken for cancer, and these, one need scarcely say, never return after removal. Chronic mastitis has also been mistaken for cancer. In rare and exceptional instances patients live for many years without recurrence of their disease, which appeared to be cancerous, and ultimately die from something else. But it is freely admitted that in the large majority of cases death after operation for malignant disease is an affair of a few months. It is only by a serial and methodic investigation that these discrepant results can be explained. Such inquiry would be of the highest value to the profession, and I hope soon to take some part in promoting it. Even though the inquiry should prove unfavourable to the surgical measures which are now in vogue we shall not be content to sit helpless, with folded hands, for pathological research already gives promise of another and perhaps more scientific mode of treatment.

I am, Sirs, yours respectfully,

E. T. DAVIES,

Assistant Surgeon to the Hospital for Women, Liverpool.

Jan. 5th, 1896.

[1] THE LANCET, Oct. 12th, 1895.
[2] THE LANCET, Oct. 19th, 1895.

DIPHTHERIA AND ITS PROPAGATION BY MEANS OF SCHOOLS.

To the Editors of THE LANCET.

SIRS,—There are many points in the reports of the various medical officers of health which are considered of trifling importance at the time and yet in the light of subsequent experience are proved to be of great value. The question in sanitary science which is occupying our minds most at the present time is as to the influences which are mostly at work in the production of diphtheria. One important observation has been made by Mr. Shirley Murphy, medical officer of health of the London County Council—viz., that an epidemic often breaks out when children meet together in the schools after the holidays—but another, equally important, has been made by Mr. Biddle—viz., that the cases fall off as the term goes on. And in order, if possible, to reconcile these apparently irreconcilable facts I have suggested that the cause of these school outbreaks may be due to imperfect flushing of drains during the holidays. In support of this contention I would cite a case which was told me by Dr. Gibbes, medical officer of health for the Kingston rural sanitary district, and no doubt put forward in one of his annual reports. Some time ago he said he had two or three outbreaks in the schools of a neighbouring village, and that, in spite of their being closed on more than one occasion, fresh outbreaks occurred immediately on their being reopened. At last he had the drain thoroughly well flushed with a strong solution of corrosive sublimate, and the epidemics then completely stopped. Of course this may have been a mere coincidence, but there could not possibly be any harm in having the drains thoroughly flushed with some strong antiseptic before each term commenced.

I am, Sirs, your obedient servant,

Surbiton, Jan. 6th, 1896. F. P. ATKINSON.

"ARE HOSPITALS TO BECOME MEDICAL CLUBS?"

To the Editors of THE LANCET.

SIRS,—In your issue of the 28th ult. (page 1671) you have an article on a meeting of the committee of the Swansea Hospital to discuss a report of the medical staff on this subject, in which you warn the working men not to be led by me save on military matters. However indifferent anyone may be to the smiles or frowns of public opinion, yet it is not pleasant to find your article repeated in the local papers. I see myself in the not very enviable position of being held up to the working men as one whose counsels are to be avoided, as if I had really been guilty of some crime in the opinion of others than THE LANCET; but if you think you had cause to warn them against me I had, I consider, better and more just reason for warning them not to be led by a report in THE LANCET of a meeting of a hospital committee, more especially at Swansea, and I do protest against the unfair way you have placed the matter before the public. You state: "Colonel Morgan said in his opinion working men had a right to their admission, and the benefit need not necessarily be a charity. Where can right come in when, as everyone knows, the hospital was for serious cases which cannot be accommodated at home or paid for without straining a working man? As the chairman said, There are the rules—we cannot alter them." Now, who reading this would suppose that Colonel Morgan and the chairman were one and the same person? The only charitable conclusion I can arrive at is that you likewise did not realise it, and so unwittingly you made the same mistake as did Balaam the son of Beor some thousands of years ago. As regards the first part, from the way you put it it means one thing; but, had you not omitted to state that the only rights I claim for them are to select or nominate their cases the same as any other subscribers, it would then have meant something different. You ask, "Where can the right come?" I reply, because we have promised it, and we ought to keep our word. I enclose a letter I wrote to the *Cambrian* on this subject on Dec. 20th, in which you will see exactly what my ideas are, and if you will do me the honour to criticise them I am quite prepared to meet you as regards the conclusion arrived at by the hospital committee that "subscribers be requested to investigate the cases they recommend." I thought it answered all the requirements, and believe it is

the only solution of the question, so I much regret that in my opinion we have been dragged into this "Battle of the Clubs" quite unnecessarily.

I am, Sirs, your obedient servant,

W. LL. MORGAN,
Lieut.-Colonel, late Royal Engineers; Chairman, Swansea Hospital.

Brynhiallu, Swansea.

*** We find from Colonel Morgan's letter to us and his letter to the *Cambrian* that we have misunderstood his position in the hospital and in regard to the question of hospital abuse. Colonel Morgan does not, we are glad to point out, allow the right of admission to working men to the use of hospitals, unless *in their opinion, and in that of the hospital committee, the cases are suitable*. He remarks in the letter to our contemporary that "the whole remedy lies with the subscribers, who should see that they only recommend suitable cases, and they ought to remember the charity of the medical staff in so kindly and generously giving their services, and see that their goodness be not abused and used to their detriment." We could not state the case better in any language of our own. We trust to the good sense of the working men to appreciate the distinction between the hospital as an institution for severe and exceptional cases and a medical club where ordinary disease has to be treated. They and their families have the exclusive use of the hospitals. These institutions are chiefly supported by the wealthier members of the community, and cheerfully so. But the subscriptions of the working men are most gratefully received and much appreciated, so long as they are not used so as to alter the whole conception of the hospital as an institution officered by medical men who give their services gratuitously in extreme cases.—ED. L.

CORONERS AND INQUESTS.

To the Editors of THE LANCET.

SIRS,—A matter has arisen recently to which I should like to draw your attention. On Christmas Day I met a messenger with a note, in which it was stated that a certain person was dangerously ill. On going to the house I found that the patient had been dead some hours. I then learnt from the registrar that the coroner had directed him to register the death. I could not communicate with the coroner until yesterday, and I presume the friends and the registrar between them managed to satisfy the coroner. Should an inquest not have been held in this case, as the deceased had not been medically treated for years? When called I expressed to a relative the belief that apoplexy would probably have been the cause of death, and I have been thinking they have made use of that information. Would a fee of 7*s.* 6*d.* be too much to charge for the visit, the place being three miles from my house, although I was going there when I met the messenger? I was in the house half an hour after meeting the messenger, or about an hour after the note mentioned above was written, so that the person who wrote the note knew at the time of writing that the patient was then dead. I shall probably have a reply from the coroner to-morrow.

I am, Sirs, yours truly,

WM. WALLACE.

Crick, Rugby, Dec. 27th, 1895.

*** In our opinion, given on the facts stated, an inquest should most certainly have been held. The fee mentioned is quite reasonable.—ED. L.

"LIFE INSURANCE OFFICES AND THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—I cannot help admiring the conduct of "M.D." with regard to a certain life assurance society. I say "a certain," because the society is probably well known to most members of the profession who have been in practice for some years. But there is another aspect to which I may be permitted now to refer. I allude to half-fees. Well may "M.D." say that "we should present an unbroken front." Quite recently I was asked to examine a patient for half a fee (10*s.* 6*d.*) and refused; a brother practitioner acted likewise, but without knowing what I had done; a third, I regret to say, utterly disregarded the dignity of the profession.

I am, Sirs, yours faithfully,

ÆSCULAP.

Jan. 8th, 1896.

PROMOTION IN THE SENIOR GRADES OF THE ARMY MEDICAL STAFF AND INDIAN MEDICAL SERVICE, AND ITS PRESENT EFFECT ON THE SISTER SERVICES.

To the Editors of THE LANCET.

SIRS,—It is not long since those officers of the Indian Staff Corps who are either in command or second in command of the native regiments obtained a wise concession from the Secretary of State granting them brevet rank in consequence of the constant supersession to which they were subjected owing to the greater celerity of promotion in the British regiments over that obtaining in the Staff Corps. I am desirous to direct attention to the present position of the officers of the Army Medical Staff serving in India, contrasting it with that of the officers of the Indian Medical Service, and to call the notice of the authorities to the condition which now obtains and to ask if some method cannot be devised to equalise the rank among the senior medical officers of the two services in India and prevent the supersedure of the officers of the "home" by those of the India Service, which is now and must be the prevalent condition for a long time to come, unless means be devised to do away with the injustice.

One measure which might possibly be of avail would, as in the case of the senior officers in native regiments, be the granting of brevet rank to the administrative officers of the Army Medical Staff while serving in India, but as the tendency in these days is to reduce brevet steps, and as its introduction might be productive of many complications, it would be well if the only real remedy for the evil—a remedy which would moreover, in my opinion, have a far-reaching beneficial effect—were at once applied: I refer to selection for merit in the higher grades of the Army Medical Staff.

The causes which have led to the present state of affairs in India are two in number, but it is only with the second that I intend to deal here, as the first is an accidental one. They are: (1) the circumstance that between the years 1860 and 1865 no officers were admitted to the Indian Medical Service, which has had a material influence in quickening the promotion of those joining the Indian army in and after the latter year; and (2) the method of regulating promotion to the senior grades which obtains in the so-called "home" and in the Indian Service. With reference to the latter and more important cause I should like to point out that, while in the Indian Service a judicious use is made of the regulation permitting selection for merit when filling the higher ranks, this most beneficial order is practically a dead letter where the officers of the Army Medical Staff are concerned. It is true that men who are not deemed fit for promotion from physical causes are occasionally made to retire, but I have long noticed the decided bias against passing men over and in favour of allowing promotion to the higher grades to go by seniority alone without any due regard to fitness for administrative duties.

I have drawn up a table showing that, taking the six seniors of the grade in the Army Medical Staff and in the medical services of the three presidencies, the rank of brigade-surgeon-lieutenant-colonel has been attained by the officers of the Army Medical Staff after thirty years' service, by those of the Bengal service after twenty-six years, and by the officers of the Bombay and Madras services after twenty-seven and twenty-eight years of service respectively. It should also be observed that three of the surgeon-colonels now serving in the Bengal army attained the rank, one in twenty-six and two after only twenty-seven years' service, and that the surgeon-major-generals of the Indian Service in Bengal were gazetted to this, the highest rank in the department, after only thirty years of service, that now, while enjoying this rank, they are the contemporaries of the brigade-surgeon-lieutenant-colonels of the Army Medical Staff, and thus supersede many officers of the Army Medical Staff with much longer service to their credit. Thus Surgeon-Colonel T. Maunsell, A.M.S., has been serving under Surgeon-Major-General Harvey, I.M.S., while the former has nearly five years' more service than the latter. In Madras, Surgeon-Colonel Churchill, A.M.S., is serving

under a surgeon-major-general of the Madras Service eight years his junior; and the second surgeon-colonel (at Bangalore) is three years senior, by length of service, to his chief. Every administrative officer of the Army Medical Staff sent to India will in the future be superseded in this manner unless selection be adopted or some other means be devised to do away with this evil, and it appears to me that, not only for the reason dwelt on here, but for many other and weighty considerations, selection is urgently necessary in the interests of the department if efficiency is to be hoped for. By its introduction competent officers who can hold their appointments for from three to five years can easily be secured, and the fatal system of "extension of service" can be abolished. It is to be feared that without selection the Army Medical Staff will continue to drift into inefficiency and its best officers will suffer disappointment. The senior executive officers have now over thirty years' service with, in many cases, hardly any hope of promotion. As the department is now regulated, good, bad, and indifferent men all receive the same treatment, and there is naturally little zeal. It may be that with the new era which has now commenced at the War Office this old bias will be swept away and that more life and vigorous fitness will be infused into the department. Such a state of things would, without question, be of considerable benefit to the army.

I am, Sirs, yours faithfully,

Dec. 30th, 1895. SELECTION.

THE RECENT DEATH SENTENCE FOR CRIMINAL ABORTION.

To the Editors of THE LANCET.

SIRS,—Referring to the recent sentence of death upon a midwife who had procured abortion in a case which ended fatally, it may be well to remind those who are apt to regard this crime as not after all very criminal that only twenty years ago Alfred Thomas Heap of Manchester, nominally a chemist, but really an abortionist, was convicted and hanged for this offence. He had procured abortion by transfixing the uterus with a Manchester spindle, in consequence of which injuries the woman died shortly afterwards. Baron Pollock, who tried the case, told the jury that if they were satisfied that the prisoner had used the instrument for the purpose of procuring abortion the death of the woman following this unlawful act made it murder. The jury found the prisoner guilty, but recommended him to mercy, in ignorance of the fact that he had previously undergone five years' penal servitude for the same offence. No hope of mercy was held out, and no serious attempt was made to obtain any commutation of the sentence. But was he any more guilty than the women who make this a regular trade? That the crime is very common is too well known; that to secure a conviction is very difficult is equally true; and those who commit it must not expect leniency from judges and jurors. There are few, if any, medical practitioners who have not at some period of their student or professional career been tempted with heavy bribes to commit this crime; but it is one of the boasts of the profession that, with very few exceptions, all its members have been too honourable and right-minded to listen to such temptations for a moment. And it is only right that severe punishments should be awarded to any persons, whether male or female, who shall be convicted of this offence, as a warning to others.

I am, Sirs, yours truly,

Jan. 4th, 1896. RECTUS.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Christmas at the Hospitals.

THE entertainments at the various hospitals were this year quite in keeping with the traditions of the season. Most of the hospitals were tastefully decorated, and appropriate mottoes and devices placed in the wards among the evergreens. At the General Hospital the presents from the Christmas tree were distributed by Mrs. Joseph Chamberlain. A programme of music was gone through, which gave much pleasure and elicited hearty applause. The Queen's Hospital gifts were disbursed by Father Christmas and received with great glee by the children. Mr. Registrar Glaisyer presided over the meeting, which was well attended and enthusiastic.

Christmas Holiday Lectures.

The Christmas holiday lectures promoted by the Midland Institute were given this year by Mr. Jordan Lloyd, who selected as his subject, "Invisible Life: how we study it, and what we know of it." It must be confessed that the manner in which the subject was treated made it complicated for a juvenile audience. However germs, bacilli, or microbes are described and their forms projected by the aid of diagrams and lantern, the subject must necessarily be complicated. Young minds at a festive season are hardly likely to derive much enjoyment from the contemplation of typhoid fever germs or erysipelas bacilli, while the magnified associations of diphtheria scarcely tend to bring comfort or contentment at a period devoted to holiday amusements.

Hospital Sunday Fund.

At a meeting of the committee for the periodical collections for local charities, presided over by the mayor, the report was read, and a cheque for £4163 16*s.* 1*d.* was handed over to the General Hospital as the proceeds of the collections at the various places of worship for the year 1895. The report stated that there was a decrease in the amount as compared with previous years, although strenuous efforts had been made this time to exceed previous occasions. Certain reasons were set forth as to the causes of the diminution. The Hospital Saturday movement was considered to be a great reason. The number of new claims for subscriptions, the formation of hospitals in the surrounding districts, and deaths and removals all operated in the decrease. A sketch of the movement was given by the honorary secretaries, various speakers expressed opinions, and finally the cheque was received with grateful thanks by the hospital authorities.

A Costly Mistake.

At the recent assizes held in this town the result of an action by the widow of a Mr. Harrop showed the price of a fatal error, which, terminating in a sad loss of life, was but justly met by a substantial award. The deceased was in the habit of taking phenacetine as a remedy for headache. In June last he called at the shop of a retail druggist and asked for a small quantity to take; he was supplied with a white powder, the taste of which, he observed, was bitter. Shortly afterwards he was seized with rigors and vertigo and died on his way to the hospital within an hour of taking the dose. A lady, also, who had taken a similar powder from the same druggist's a few days before had died from convulsions within an hour of its administration. The powder at the post-mortem examination of Mr. Harrop was found to be composed largely of strychnine. The druggist stated at the inquest that the bottle labelled "Phenacetine" had been supplied to his order by the wholesale druggists. He had ordered at the same time a small quantity of strychnine, which came in a separate bottle with label, but the contents of which were proved to be pure phenacetine. By some extraordinary blunder the contents of the first bottle had come to be composed of one-third strychnine and two-thirds phenacetine. The wholesale druggists admitted the responsibility, and, a consultation being held, a settlement was effected upon the following terms. The record was withdrawn, the defendants agreed to pay £2800 damages and plaintiff's taxed costs, and the retail druggist was to pay his own costs and undertake not to bring any action against the wholesale druggists in respect of the plaintiff's death or its consequences. The amount is undoubtedly heavy, though no monetary compensation can atone to the widow for the loss of her husband. The manner in which the claim was met was honourable and just, worthy of the reputation, hitherto acknowledged, of the wholesale firm. It stands out as a sad warning and points to the absolute necessity of extreme care and precaution in dealing with deadly drugs.

Jan. 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh Royal Infirmary.

THE annual general meeting of the contributors to the Royal Infirmary was held on Jan. 6th, the Lord Provost presiding. The annual report for 1895 showed that during the year 10,032 patients had been treated in the wards; of these, 686 had died. The total number treated was in excess of the preceding year. The average daily number of patients

in hospital had been 719. In addition to in-patients 25,768 had been treated in the out-patient departments. The ordinary receipts amounted to £31,086. The managers note with satisfaction an increase in contributions from various sources, including church collections and sums received from public works, the amount from the latter being in excess of any previous year. The ordinary expenditure had been £39,395, being a decrease on last year of £2679. The total expense of each occupied bed was £55 8*s*. 2*d*., or £3 2*s*. 2¼*d*. below last year's rate, this reduction including 17*s*. 5*d*. for maintenance and £1 15*s*. 8*d*. for medical expenditure. The extraordinary income for the year, including legacies and donations of £100 and upwards, was £15,333. The extraordinary expenditure was £2897. It was further stated that the old building debt, which amounted to £2095, had been paid off during the year. There were 112 nurses on the staff. Since the last report two large legacies had been left free of restrictions; one of these was from the Earl of Moray for £50,000, and the other from Mr. Petter Waddell, of Leith, for £25,000. It had been resolved to devote part of these sums to wipe off the debt on the infirmary. The remainder, amounting probably to £30,000, it was proposed to apply towards the extension of the institution, not on the large scale at one time intended, but on a scheme which was estimated to cost about £50,000 or £60,000. The Lord Provost, in proposing that the report be sent to the committee for consideration, pointed out the great increase in the number of in-patients and out-patients since the year 1880 and the demand for more accommodation. He also intimated the re-election of a number of managers and the election of Miss Louisa Stevenson as a new manager.

Edinburgh University Annual Report.

The annual report of the University of Edinburgh shows the total number of matriculated students to have been 2836, including 167 women. Of these, 1475 were in the Faculty of Medicine, and the number of first-year students was larger than in the preceding years. Of the medical students 635 belonged to Scotland, 464 to England and Wales, 84 to Ireland, 72 to India, 193 to British colonies, and 27 to foreign countries. The number of women students of medicine attending extra-academical lecturers with a view to graduation in the university was 39. During the year 221 candidates had received the degrees of M.B., C.M., and 71 the degree of M.D.

The Christmas Vacation, Edinburgh.

The Christmas and New Year vacation has terminated, and the medical classes were reopened on Jan. 7th. Many of the lecturers and members of the infirmary staff have been able to go out of town for a few days to get freshened up for the heavy half of the winter session which still lies before them. Medically, Edinburgh has been uneventful, but here as elsewhere the keenest interest has been taken in Dr. Jameson, his doings and his possible fate. It is not too much to say that the profession liked him and believed in him, and deplore his downfall.

Jan. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Queen's College, Belfast, and the Royal University.

A MEMORIAL, signed by all the professors and lecturers of the medical faculty of Queen's College, Belfast, has just been presented to the Standing Committee of the Senate of the Royal University, strongly protesting against the clinical examinations in the subjects of medicine and surgery, which were introduced for the first time into the Third Examination in Medicine at the autumn examination of the year 1895. All the universities and licensing boards of Great Britain and Ireland have recently modified their examinations owing to the extension of the medical curriculum by the addition of the fifth year, and it is noteworthy that none of these bodies, with the exception of the Royal University, has proposed to substitute a clinical examination earlier than at the end of the fifth year—i.e., at the Final Examination. At the Third Royal University Examination in Medicine students are examined in anatomy, physiology, and materia medica. This is not the time to introduce such a new subject as a clinical examination. To do so will either lower the standard of examination in anatomy and physiology or it will increase the already high proportion of rejections. The memorialists think that these clinical examinations, while undoubtedly interfering with the acquisition on the part of a candidate of a practical knowledge of the scientific bases of medicine and surgery, will not conduce to improvement in clinical knowledge. If the limits embraced by the preliminary or elementary clinical examinations are strictly defined, it will inevitably lead to cramming of the specific subjects of the syllabus rather than genuine practical study of the cases seen in hospital. If, on the other hand, the scope of the examination is undefined the student will be liable to be examined on a subject of great extent and complexity, with, of necessity, a limited practical experience and a very defective theoretical knowledge of disease. Finally, it is believed that to introduce a clinical in the midst of the student's earlier examinations appears to the memorialists to be a retrograde step and contrary to the spirit of recent medical legislation. I understand that this question of the clinical examination at the Third Examination in Medicine was considered by the medical sub-committee of the Royal University on Jan. 4th, and that they have unanimously decided to recommend the Senate to abandon it.

Surgeon-Lieutenant-Colonel S. H. Browne, M.D., C.I.E.

Among the recipients of New Year's honours conferred by the Queen is Dr. S. H. Browne, President of the Medical College, Lahore. Dr. Browne was a distinguished student of the Belfast Medical School and graduated in the Queen's University in 1870. He subsequently became a surgeon in the Royal Navy, and after serving there for some years exchanged into the Indian Army, in which he has risen to a very high position.

The Water-supply of the Londonderry Corporation.

The Irish Society has been asked by the Derry Corporation for a grant in aid of the corporation's project of tapping the Killea Burn, enclosing a cantonment area in the vicinity, and leading the water in pipes to the city reservoirs, which are on a lower level; but the society replied that, in the face of a report on the scheme by Mr. Hassard, C.E., they could not feel justified in giving financial aid. Mr. Hassard condemned the scheme, but recommended another, known as the Cabry Water Scheme, which the corporation twenty-five years ago considered and abandoned. It is now suggested that another reservoir should be built in order to prevent scarcity in the summer months.

Enniskillen Union Workhouse.

Mr. Gunning, medical officer of the Enniskillen union workhouse, has been obliged through ill-health to resign his appointment, and several of the guardians at their last meeting spoke in very warm terms of the manner in which he had discharged his duties.

The Battle of the Clubs at Cork.

When the original rules were made the wage limit was fixed at £200 a year. No doubt that was a high figure, but at the time it was felt that too great opposition amongst the clubs might be excited if all at once a proper wage limit were insisted on. Now that the contest has gone on for a year the great majority of the profession are disposed to exclude from the clubs all but really deserving members, and, as an indication of what is likely to occur, I may mention that if the proposed medical club had been formed the committee would have named £100 a year as the limit. That is a step in the right direction, and one which I am sure will commend itself to members of the profession in other districts who, owing to a want of knowledge of local facts, were inclined to think the Cork men were unduly lenient. At the last annual dinner of the Medical Society the Mayor was one of the guests, and, referring to the conference of delegates from the medical men and clubs, which had been held at his request, he stated that the medical men of Cork, in refusing to meet the imported man in consultation, had adopted a course which had his entire approval. We hear nothing now of the druggist's shop which the more ardent spirits of the clubs defiantly announced some time ago would be established for the purpose of absorbing all the trade of the existing druggists. Cork club members, especially the rich ones, always exhibited considerable prudence in the expenditure of money.

Jan. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

State Hygiene in Italy.

IF a test were wanted of the degree to which civilisation has advanced in any country it would be supplied by its sanitary legislation. Since her "risorgimento" Italy has striven hard to respond satisfactorily to this test, and, for the short period of her independence and unity, she has scored some conspicuous successes. These she owes in great measure to the able head of her Public Health Department, Dr. Luigi Pagliani, Professor of Hygiene in the University of Turin. An apt pupil of the late Professor James Moleschott, he early saw the necessity of organising a school of practical instruction in the laws of health as bearing on communities, and in the "Scuola di Perfezionamento nell' Igiene Pubblica," whose eighth year of life opened on the 2nd inst., he has witnessed the attainment of one of his ideals. Physicians, veterinary surgeons, chemists, and engineers all avail themselves of the teaching provided by a well-chosen staff of lecturers and demonstrators, the number admitted to this year's course amounting to eighty, of whom the majority are medical practitioners and veterinary surgeons, with ten chemists and two engineers. The service thus rendered by Professor Pagliani, who directs the school, is but one out of the many in the hygienic sphere, and should have sufficed, one would have thought, to protect him from party or regional jealousies. Such, it seems, is not the case. At least, in some organs whose *raison d'être* appears to be hostility to Signor Crispi, he is taxed with a too great partiality to the medical school of which he is a member. For instance, the "Consiglio Superiore di Sanita," over which he presides, has shortly to be reconstituted, and he is reminded that among the five medical men proposed by him for election the Lombardo-Subalpine element so preponderates that the schools of Southern Italy (Naples, for instance, and Palermo) are not represented at all. Now this is a question into which, as a correspondent of THE LANCET, I have no wish to enter. Certainly the Neapolitan school has alumni well worthy of State recognition, and, if Professor Pagliani, for the time at least, passed it over, it can surely be for no other reason than the sufficient one—"detur digniori." He is not likely on this occasion, any more than on similar ones, to forget the duty he owes to country and profession alike, and to make regional or party considerations dictate his choice of coadjutors in a public office of the highest importance. Signor Crispi, the creator of the "Direzione di Sanità," is himself a Southern Italian, *pur sang*, and nothing would gratify him more than to see his "concives" of the Two Sicilies preponderating in posts under Government. But he is a statesman as well as a patriot and wisely leaves Professor Pagliani a free hand in the choice of his *personnel*, content with efficient public service, from whatever part of the country it be drawn.

Mania Pellagrosa.

The mental neuroses incidental to pellagra often assume a homicidal character, of which a tragic case has just happened in the Venetian province. A peasant labouring under pellagra was suddenly seized with a maniacal fit, in the course of which he took up a hatchet and struck his wife on the head, causing instantaneous death. His three sons, returning from the fields, found their mother a corpse and their father patrolling the neighbourhood in high mental exaltation. Arrested and imprisoned at Piova, he could give no account of his motive for the murder. This is one of a series of similar lethal acts lately committed by *pellagrosi*, acts which call loudly for stricter surveillance on the part of the local authorities, municipal and sanitary, pending such more radical measures of prophylaxis as the impounding of diseased maize and the improvement of the aliments served out to the agricultural population.

Jan. 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxin Treatment of Diphtheria.

A HIGHLY interesting report on the antitoxin treatment of diphtheria has just been published in the *Wiener Klinische Wochenschrift* by Dr. Knoepfelmacher. The death-rate from diphtheria in the Carolina Hospital for Children from 1889 till October, 1894, was from 40 to 51 per cent., and was higher than the average mortality from diphtheria in Vienna, which in 1892, 1893, and 1894 amounted to 36·4, 34·2, and 35·5 per cent. respectively. At all the hospitals the mortality is high in consequence of the numerous cases of septic and laryngeal diphtheria which are admitted, while private patients are more resistent and, as a rule, live under better hygienic conditions than the hospital patients. The high death-rate from diphtheria in hospitals may be seen from the report for 1892. During this year 547 cases were admitted to the General Hospital, of which 279 were fatal, and 1525 cases to the five hospitals for children, with 706 deaths, making a total of 2072 cases with 985 deaths, being equal to a mortality of 47·5 per cent., whereas in the same years only 595 deaths occurred among 2260 cases (or 26·3 per cent.) in private patients. From October, 1894, when the antitoxin treatment was introduced in Austria, till July, 1895, there were reported 3035 cases of diphtheria with 732 deaths (or 24 per cent.). Among the 1213 cases which during this time were treated in hospitals there were 312 deaths (25·7 per cent.), whereas 420 deaths were registered among 1822 private patients, being equal to a mortality of 23 per cent. These figures show a decrease of the hospital mortality to less than half its previous rate, due to the serum treatment which is systematically employed in hospitals. During the same period there were admitted 100 cases of diphtheria to the Carolina Hospital, and there have been injected in 16 cases with 4 deaths 600 units, in 72 cases with 12 deaths 1000 units, in 3 cases without any death 1600 units, in 4 cases with 2 deaths 2200 units, and in 5 cases with 3 deaths 2600 units. Although no local treatment was employed the death-rate decreased 50 per cent. Following Escherich, Dr. Knoepfelmacher distinguished three groups of diphtheria. Among the 57 cases of the first group, comprising the localised form, no death occurred during the antitoxin treatment. In the second group (progressive diphtheria) a decrease of the signs of obstruction was observed in 12 of 38 cases of croup. In the third group (septic diphtheria) the serum treatment obtained no success, though large doses were used. As regards age, there were 25 children under two years, of whom 10 died (1 from septic diphtheria and 9 after tracheotomy); 16 children were at the age of three years, 12 of four years, 10 of five years, 7 of six years, 8 of seven years, 8 of eight years, 3 of nine years, 2 of ten years, 3 of eleven years, 3 of twelve years, 2 of thirteen years, and 1 of fourteen years. The false membranes were easily loosened and disappeared in 7 cases in three days, in 20 cases in four days, in 10 cases in five days, in 9 cases in six days, and in 13 cases later than six days after admission to the hospital. Albuminuria was observed in 27 cases and hæmorrhagic nephritis in one case. In 2 cases symptoms of dilatation of the heart occurred, with irregular and accelerated pulse; both recovered. An eruption resembling scarlet fever or erythema multiforme was observed in 13 cases. Death occurred in 5 cases within twenty-four hours, in 4 within two days, in 1 case within three days, in 5 within four days, in 1 within five days, in 2 within six days, in 1 within seven days, in 1 within eight days, and in 1 within twelve days. Five patients died from croup without complication, 1 from croup with pneumonia, 1 from croup with pneumothorax, 3 from croup with lobular pneumonia, 2 from pneumonia, 2 from phthisis with pneumonia, 1 from phthisis with peritonitis, 3 from septicæmia, 1 from bleeding from the eroded subclavian vein in consequence of enlargement of the wound after tracheotomy, and 1 from scarlet fever. Dr. Knoepfelmacher considered that the loosening of the false membranes in the larynx and trachea and the decrease of the mortality prove that antitoxin possesses a specific curative power.

Jan. 7th.

AN UNREGISTERED "DENTIST" FINED.—At West Ham Police-court, on Wednesday, the 8th inst., Ernest H. Richards, of Zingari-terrace, Gipsy-lane, Forest-gate, was fined £5, with £1 10*s.* costs, for taking and using the title of "dentist" without being registered as such under the Dentists Act. The defendant pleaded that he was a manufacturing dentist, and that when persons called upon him to have operations performed he took them to a registered dentist, but the plea was not allowed by the magistrate, who imposed the above fine, remarking that the public must be protected.

Obituary.

WILLIAM PENNY BROOKES, F.R.C.S. ENG., J.P.

MR. BROOKES, of Much Wenlock, Shropshire, whose death at a very advanced age occurred on Dec. 10th, 1895, was in many respects a remarkable man, and one whose influence extended widely. He was the son of a medical practitioner in Much Wenlock, and was born in August, 1809. He studied medicine at Guy's and St. Thomas's Hospitals, and in Paris under Dupuytren, Chopart, and Laennec. During his stay in Paris a revolution broke out; English residents were in especial danger, and a fellow-student was shot whilst sitting at his window. In 1830 his father died; in the following years he took the diplomas of the Royal College of Surgeons of England and the Society of Apothecaries of London, succeeded to his father's practice, and passed his life in Much Wenlock, only retiring from professional work in 1891. Mr. Brookes was an active philanthropist and delighted in using his talents for the public benefit. When he commenced practice Much Wenlock was but a small place containing less than five hundred houses, and, as might have been expected, sanitation received but scant attention. Through his instrumentality, however, gas-lighting was introduced, an open sewer in the main street was covered over; a library and reading-room were provided, and in course of time a museum was added, for exhibition in which he obtained ancient deeds relating to the monastery, a large number of ancient coins, British and foreign, and a collection of local antiquities. He was a diligent reader, an accomplished Latin and Hebrew scholar, and so convinced of the advantages of athletics as a branch of education that he took a leading part in the movement which resulted in the institution of the National Olympian Association in the year 1850. This was the germ of the International Olympian Society of Paris, the first contests of which are to be held in Athens during the present year and the second in Paris in 1900. Mr. Brookes became a Fellow of the Royal College of Surgeons of England in 1870. Forty or fifty years ago he was a strenuous advocate of reform in that corporation, and numerous contributions from him on the subject are to be found in the columns of THE LANCET. His funeral took place on Dec. 13th amid general demonstrations of public mourning.

ARTHUR JACKSON, M.R.C.S. ENG.

BY the death of Mr. Arthur Jackson, which was announced in THE LANCET of Jan. 4th, Sheffield has lost a son of whom the town has every reason to be proud, inasmuch as he united the qualities of a skilful surgeon, an energetic public man, and an eminent authority on local history and antiquities. This conjunction of medical knowledge with various branches of literary culture has probably been becoming less common during the last forty years, a circumstance which renders Mr. Jackson's early death the more to be deplored. He was born fifty-one years ago in Sheffield, where his father was a respected practitioner, well known for his literary tastes. Following the example of his elder brother Henry, who was named after their father, he determined to enter the medical profession, and, accordingly, studied at the Sheffield School and at St. Bartholomew's Hospital in London, where he filled the post of house surgeon. In 1866 he became a Member of the Royal College of Surgeons of England, and on his father's death, which occurred in that year, he commenced practice in his native town and speedily obtained an appointment as surgeon to the hospital in West-street. This he retained until 1877, when he became consulting surgeon in consequence of being elected surgeon at the Sheffield Infirmary in succession to the late Mr. Samuel Parker, and was senior surgeon of the infirmary at the time of his death. He was also a member of the city council for several years, his first election being in 1885 and his last in 1894. Mr. Jackson was lecturer on surgery in the Sheffield School of Medicine and a contributor to periodical medical literature. It is to be regretted that, although he lectured sometimes on his researches into the history and antiquities of the town, yet he never found opportunity to publish anything on those subjects. He was well qualified to do so, for he accumulated a considerable library of authorities on these topics and possessed an altogether exceptional knowledge of the Sheffield of the past. Mr. Jackson has left a widow but no family. His funeral took place on Jan. 1st in presence of a very large assemblage, including representatives of the municipality, the Royal Hospital, the Infirmary, and several other institutions.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. J. E. Michael, formerly Professor of Anatomy and Clinical Surgery in the Maryland University, Baltimore.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:—

PRIMARY EXAMINATION, PART I.:—

Chemistry, Materia Medica, and Pharmacy.—J. Jones, Edinburgh, and W. R. Wilson, Dublin.
Chemistry.—J. H., Beasley, Birmingham; K. M. Betts, Edinburgh School for Women; and H. M. Serjeant, Royal Free Hospital.
Materia Medica and Pharmacy.—A. Avent, St. George's Hospital, and E. Yoxall, Birmingham.

PRIMARY EXAMINATION, PART II.:—

Anatomy and Physiology.—G. H. Bedford, Guy's Hospital; C. G. Catterall, Leeds; H. N. Collier, Guy's Hospital; J. T. Crowe, St. Mary's Hospital; D. R. Dhabhar, Bombay; L. T. Lavan, St. Bartholomew's Hospital; W. M. McLoughlin, University College; L. Martindale, Royal Free Hospital; H. Munro, Guy's Hospital; E. B. Stevenson, St. Bartholomew's Hospital; and L. L. G. Thorpe, University College.
Anatomy.—L. Bradstock, Birmingham; M. Caldwell, Belfast; G. W. H. Edgelow, London Hospital; T. R. Griffiths, University College; A. R. Henchley, Middlesex Hospital; B. Lewitt, St. Mary's Hospital; H. J. Pickering, St. Bartholomew's Hospital; and A. J. Rencontre, Madras.
Physiology.—P. Cator, St. Bartholomew's Hospital; K. Datta, Glasgow; W. Eales, Manchester and Sheffield; P. T. Goodman, St. Thomas's Hospital.
Biology.—E. Courtauld, K. E. Gregg, M. E. Rocke, A. M. Smith, and M. Williams, all of the Royal Free Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Ernst Stadelmann of the hospital at Urban, and formerly of Dorpat, has been recognised as *privat-docent*.—*Florence:* Dr. E. Bagnis has been recognised as *privat-docent* in Ophthalmology.—*Heidelberg:* Professor Körner of Rostock, where he teaches otology and laryngology, has been offered a similar chair.—*Philadelphia* (*Policlinic*): Drs. H. F. Hansell, J. K. Young, and D. Stewart have been appointed to professorships of Ophthalmology, Orthopædic Surgery, and Diseases of the Digestive Organs respectively.

DIPHTHERIA IN LONDON.—There are not wanting indications of late weeks that diphtheria in London is decreasing. The decline commenced so far as mere amount of the disease was concerned, several weeks ago, but as much cannot be said for the amount of fatality of the malady, which remains high, notwithstanding the decrease in the number of attacks. The continued high death-roll from week to week is a sign of malignancy of type, apparently out of keeping with the seeming waning of a long-sustained epidemicity of diphtheria in the metropolis. During last week the deaths numbered 66—i.e., 30 in excess of the average of the initial week of the ten years 1886-95. The sanitary area of Fulham had as many as 9 deaths credited to it, and 6 each were credited to Islington and Bethnal Green. In Mile End Old Town there were 5 deaths, and 4 respectively in Hackney, Battersea, Camberwell, and Plumstead sanitary areas. Divided among the several registration areas of London we find the 66 deaths arranged as follows:—Western districts, 11; northern districts, 20; central districts, 2; eastern districts, 11; and southern districts, 22 deaths. In the outer ring there were 14 deaths from diphtheria during last week, 3 being in West Ham and 5 in Edmonton districts. A notable amount of diphtheria seems lately to have occurred in the northern suburbs comprised in the Edmonton union. Of the 66 deaths in the county of London, 3 occurred in infants aged under one year, 44 in the next four years of life, 17 in the succeeding fifteen years, and only 2 in persons aged over twenty years. These 66 deaths compare with 63, 62, and 71 in the three preceding weeks. The admissions to hospital in the week were 98, as against 91, 104, and 93; and the number of patients remaining under treatment on Saturday last was 683, as against 705 on the Saturday immediately before.

SOCIETY FOR THE STUDY OF INEBRIETY.—A quarterly general meeting of this society was held in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., yesterday (Thursday) afternoon. The chair was taken by the President, Dr. Norman Kerr, and Mr. W. H. Kesteven read a paper entitled "The Proper Method of Dealing with Habitual Drunkards."

MANCHESTER MEDICAL SOCIETY.—The following is the list of office-bearers for the year 1896:—President: Dr. Ashby. Vice-Presidents: Dr. Brooke, Dr. Bury, Dr. Edge, and Dr. Moritz. Treasurer: Dr. Glascott. Secretary: Mr. Coates. Committee: Mr. Bishop, Dr. Faulkner, Dr. Griffith, Dr. T. A. Helme, Mr. Milner, Dr. Railton, Dr. Reynolds, Mr. E. Roberts, Mr. Thorburn, Dr. Torrop, Dr. Walter, and Dr. Woodcock. Library Committee: Dr. Kelynack, Dr. Wild, and Dr. R. T. Williamson. Auditors: Dr. J. G. Clegg and Mr. J. E. Platt.

PRESENTATION.—Dr. Edward Liddon, J.P., of Taunton, was the recipient of a handsome presentation from the followers of the Taunton Vale Harriers, the mastership of which he has held for twenty years. It consisted of a large loving-cup of Georgian pattern, with cover. Engraved on it were the following words: "Presented to Edward Liddon, Esq., M.D., by the Taunton Vale Harriers' Hunt, Dec. 30th, 1895." The cup was mounted on an ebony plinth, attached to which was a silver plate bearing the names of about one hundred subscribers.

ANNUAL REPORT OF THE BRISTOL DISPENSARY FOR 1895.—The committee of the Bristol Dispensary, in their annual report for 1895, which has just been issued, state that the receipts from subscriptions are the same as for the year previously, but the recommendation notes bearing a charge have again slightly decreased. In order to afford the patients at Bedminster, the number of whom has increased, the advantage of a dispensary in their neighbourhood, the committee has decided to erect a building in that part of the city. The cost will be about £2400. The amount of the annual subscriptions is less by £650 than the expenditure. The committee would regret selling investments, as it would reduce materially the income of the institution.

THE RESIDENT STAFF ENTERTAINMENT AT ST. BARTHOLOMEW'S HOSPITAL.—The annual entertainment to the resident staff of this hospital was given on Jan. 2nd and 3rd, and consisted of performances by the Dramatic Society and the Orchestral Society, with some songs. The pieces selected were *Cool as a Cucumber* and *Woodcock's Little Game*. All the performers were above the level of the ordinary amateur actor, but special praise must be given to Mr. J. Hobday and Mr. J. Boyan, the latter of whom is a born comedian. We must congratulate Mr. R. W. Metcalfe, the conductor of the orchestra, on his wood wind, for this is generally the weak part of a non-professional band, but they came out well in the Rosamunde overture, which so well displays Schubert's fondness for the wood wind and his skill in treating it. There was a large audience of old St. Bartholomew's men as well as present students.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting of medical practitioners connected with British health resorts, held at Limmer's Hotel, Conduit-street, W., on Nov. 9th, 1895, the above society was formed to carry out the following objects:—To provide means for the association of medical practitioners connected with British health resorts and to promote good fellowship amongst themselves and with members of other branches of the medical profession; to encourage the theoretical and practical investigation and study of balneo-therapeutics and medical climatology; and to advocate and sustain within the profession the interests and claims of British balneology and climatology. The honorary president of the society is Sir Edward Sieveking, the president is Dr. Henry Lewis of Folkestone, and the secretaries are Mr. A. A. Macfarlane, of 1, Montpellier-terrace, Brighton, and Dr. Septimus Sunderland, of 35, Bruton-street, London, W., to whom applications concerning membership should be made. All qualified practitioners who take an interest in the subjects of balneology and climatology are also eligible for membership. It is proposed to hold most of the meetings for papers, discussions, &c., in London. The inaugural meeting will be held on Wednesday, Jan. 22nd, at 8 P.M., at Limmer's Hotel, Conduit-street, when addresses will be given by Dr. W. Miller Ord and others.

FORMATION OF A MEDICAL SOCIETY AT BEDFORD.—A meeting of the medical men at Bedford and district was held at the Infirmary on Thursday, Jan. 2nd, Mr. Hughes Hemming of Kimbolton occupying the chair. It was decided to form a medical society in Bedford "for the promotion of professional intercourse, for the reading of papers, for the exhibition of cases, patients, pathological specimens, &c., and for the discussion of all questions affecting the welfare of the profession." Meetings will be held at the Infirmary quarterly at 3·30 P.M. The following officers were elected for the ensuing year—President, Dr. G. P. Goldsmith; treasurer, Mr. A. Chillingworth; secretary, Mr. W. Gifford Nash.

BRITISH ORTHOPÆDIC SOCIETY.—The first annual meeting of this society was held at the Royal Orthopædic Hospital, Oxford-street, on Wednesday, Dec. 18th, 1895. Present: Mr. B. E. Brodhurst (in the chair), Messrs. Ewens, Moxey, Jackson Clarke, Openshaw, D'Arcy Power, Reeves, Keetley, Little, Dr. Sunderland, and Mr. Luke Freer and Mr. Tubby (hon. secs.), together with Messrs. Baker, Sayers, and Tombs, and Dr. Moulouguit (Amiens) and Dr. Calôt (Berchsur-Mer) as visitors. The hon. treasurer's and hon. secretaries' reports were read and adopted; in the latter, after speaking of the inauguration of the society and the three successful meetings held, especially that at Liverpool, where the members had been most hospitably entertained by Mr. Robert Jones and the Liverpool members, the hon. secretaries expressed a hope that the society would be enabled to publish its transactions annually in book form. Messrs. Keetley, Power, Reeves, and the hon. secretaries were elected as a sub-committee to deal with the latter subject. Mr. Keetley was re-elected treasurer, and Messrs. Openshaw, Brodhurst, and Rawdon were elected to fill vacancies on the council. At the invitation of Mr. Luke Freer the next ordinary meeting was decided to be held in Birmingham in May next. An ordinary meeting was held immediately after the annual meeting. Mr. Reeves and Mr. Keetley showed cases of Congenital Hip Dislocation, the former demonstrating his instrument for extension. In the discussion that followed Mr. Brodhurst and Dr. Calôt took part, mainly dealing with operative interference in such cases. Messrs. Baker and Walsham had on view some interesting cases of Congenital Absence of the Fibula; Mr. Brodhurst showed a cast of a severe case of Talipes Equino-varus; and Mr. Ewens one of a case of Severe Talipes-calcaneo-valgus in an Infant. Mr. Baker demonstrated the action of his wrench for Talipes Equinus and Varus. The meeting terminated with a vote of thanks to the committee of the Royal Orthopædic Hospital for the use of their board-room for the meeting.

THE DIFFUSION OF SMALL-POX.—There was a death from small-pox registered in London during the week ending Dec. 28th, 1895, occurring in a vaccinated adult; he was removed from the Greenwich sanitary district to the hospital ship *Castalia*. A fortnight previously a death had also been registered from the disease in the metropolis, the deceased being an adult coming from Newington, and concerning whose vaccination no statement was forthcoming. The deaths from small-pox in London have not exceeded 1 in any week since the middle of October. Greenwich now seems to be the only centre of infection in the metropolis, though there the malady has been causing some uneasiness for the past month or so, as many as 5 cases having, for instance, arisen in one street alone. Not far distant small-pox has been somewhat prevalent at West Ham, where about 40 cases were notified in November, with many additional cases last month. The medical officer of health, in reporting to his town council on the matter, is inclined to attribute the infection to the importation of disease by means of Kentish hop-pickers. In December a discussion arose at a meeting of the council as to the condition of the streets in which the cases chiefly occurred; and the remark was hazarded that there was little use in having recourse to vaccination whilst the state of the localities from which the disease came was so disgustingly insanitary as was the case. The streets in question were described as being scarcely fit for pigs to live in. Thus the true facts of the prophylactic qualities of vaccination were concealed behind what seems, nevertheless, to be a disgraceful state of things in the borough. In the west the scare created in Gloucester by the notification of cases of small-pox in November has not by any means subsided. Towards the close

of last month it was stated that more than 20 cases with 2 deaths had arisen, in each instance the patients being at once isolated and their relatives placed in quarantine. It is well known that Gloucester is a hotbed of anti-vaccinationism, the laws as to vaccination having been for a long time in abeyance. At Hereford some discussion has followed the development of a case of small-pox in a tramp who had been sent from Ross to the Eye and Ear Hospital, and who had thereupon been transferred to the workhouse isolation ward. It was felt to be hard that the patient having been sent from Ross workhouse to Gloucester, the Ross board of guardians could not be held responsible for his maintenance. At Exeter 2 cases have been recorded; one arose in the person of a railway employé from London, and in the other the malady was contracted whilst nursing. Measures were at once adopted for preventing the spread of the disease. Two cases have been recorded at the Wonford Inn, near Exeter, in the St. Thomas's rural district. It was desired to secure the removal of the patients to the sanatorium, but the necessary certificates could not be obtained from the medical attendant, who could not certify against the lodging and accommodation of the sufferers. A case of small-pox was reported to the Merthyr Tydfil guardians just before Christmas; the patient had been an inmate of the workhouse infirmary and was at once removed to the fever hospital. Manchester and Salford, and, indeed, most of the Lancashire towns, continue to be free from the disease. At Royton, however, further cases have occurred and have been isolated in the Cinder-hill Hospital. At Dublin small-pox seems to be quiescent, the weekly admissions to hospital having recently been few in number: during the week ending Dec. 21st there were 2 admissions, 1 discharge, and 1 death, 13 cases remaining under treatment, a number identical with that of each of the preceding two weeks.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARRY, J., M.D. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Ballyduff Dispensary, vice Stephenson.

BERRY, WM., J.P., F.R.C.S.I., D.P.H., has been appointed Medical Officer of Health and Superintendent of the Sanatorium, County Borough of Wigan, vice W. C. Barnish, deceased.

BEVAN, RICHARD, L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health by the Lydd Town Council.

BROWNING, B., L.R.C.P. Lond., M.R.C.S., D.P.H. Edin., has been appointed Medical Officer to the Post Office Service at Weymouth, vice Drury, resigned.

COLE, F. W., M.B., Ch.B. Dubl., has been appointed Medical Officer of Health by the Bolsover District Council.

DONNAN, W. D., M.B., B.Ch. R.U.I., has been appointed House Physician to the Belfast Royal Hospital, vice Magowan.

DUNDAS, M. G., M.R.C.S., has been appointed Medical Officer by the Mitford and Launditch Rural District Council.

EVANS, R. W. J., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health by the Wrexham Town Council.

GRAVELY, H., M.R.C.S., has been reappointed Medical Officer of Health by the Chailey Rural Council.

HARCOURT, GEO. R., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer and Dispenser at the Infirmary of the Parish of Lambeth.

HARDWICK, A., M.D. Durh., D.P.H. Eng., has been appointed Medical Officer of Health by the Newquay Urban District Council.

HODGE, ALBERT, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Chorlton-upon-Medlock Dispensary, Manchester.

JONES, S. E., L.R.C.P., L.R.C.S. Edin., F.F.P.S. Glasg., has been appointed Medical Officer for the Sanitary Districts of Shocklach Church and Shocklach Ovatt.

LAMB, J. H., M.B., C.M. Edin., has been appointed House Physician to the Royal Berks Hospital, Reading.

LEES, J. FERGUSON, M.B., C.M. Glasg., has been appointed House Surgeon to the Hartlepools Hospital, vice A. V. Macgregor, M.B., C.M., resigned.

MACGREGOR, D. A., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Skelmanthorpe Urban District Council.

MACKINLAY, J. E. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Fever Hospital by the Kirkleatham Urban District Council.

MAGOWAN, S. M., M.B., B.Ch. R.U.I., has been appointed Senior House Surgeon to the Belfast Royal Hospital, vice Donnan.

MENZIES, HENRY, M.B., B.C. Camb., has been appointed Obstetric Assistant to St. George's Hospital.

MORRISON, A., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary of the Parish of St. Pancras.

NUTTING, E. S., M.B., C.M. Edin., has been reappointed Medical Officer for the Third Sanitary District of the Mansfield Union.

PATCH, H. H. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Chudleigh Sanitary District of the Newton Abbot Union.

PATTERSON, G. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Dalton-in-Furness Urban District.

RUSTON-HARRISON, G. H., M.B., C.M. Edin., has been appointed House Surgeon to the Royal Berks Hospital, Reading.

SAUNDERS, BERTRAM, M.B., C.M. Aberd., has been appointed Junior House Physician to the North-Eastern Hospital for Children.

TEW, JAMES S., M.D. Durh., B.S., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the Sevenoaks Combined Urban Sanitary District and the Bromley Combined Rural Sanitary District.

TONKING, J. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Camborne Sanitary District of the Redruth Union, vice Erskine.

TURNER, WILLIAM, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Sambrooke Surgical Registrar to King's College Hospital, vice L. V. Cargill.

WACHER, FRANK, M.R.C.S., has been reappointed Medical Officer of Health for the Canterbury Urban Sanitary District.

WALSH, R. P., L.R.C.P., L.R.C.S. Irel., has been appointed, *pro tem.*, Medical Officer for the Enniskillen Union Workhouse.

WILDING, W. F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon for the Hindley District of the Wigan Junction Colliery.

WILSON, R., L.F.P.S., L.M. Glasg., has been appointed Medical Officer for the Newchurch Sanitary District of the Haslingdon Union.

YOUNG, THOS. B., M.D. Brux., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Halesowen Urban Sanitary District, vice E. Turner.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BRADFORD INFIRMARY.—Dispensary Surgeon. Salary £100 per annum, with board and residence.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

COUNTY ASYLUM, Upton, near Chester.—Junior Assistant Medical Officer. Salary £120 per annum, with board (no liquors), lodging, and washing.

FISHERTON HOUSE ASYLUM.—Assistant Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and washing. Applications to Dr. Finch, the Asylum, Salisbury.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Junior House Surgeon. Board, lodging, and laundry provided in the hospital.

HOSPITAL FOR WOMEN, Soho square, London, W.—Registrar, for twelve months. Honorarium 25 guineas.

HOSPITAL OF THE EVANGELICAL PROTESTANT DEACONESSES' INSTITUTION, The Green, Tottenham.—Physician for In-patients and Physician for Out-patients.

LONDON HOSPITAL, Mile-end, E.—Two Assistant Anæsthetist for six months. Salary at the rate of £50 a year each.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

ECCLES.—On Jan. 3rd, at 63, Sackville-road, Hove, the wife of G. Tolcher Eccles, M.A., M.B. Cantab., of a son.

MINTER.—On Jan. 5th, at Mansion-row, Chatham, the wife of Ernest D. Minter, Surgeon R.N., H.M.S. *Rupert*, of a son.

ROBINSON.—On Jan. 3rd, at Devon Villa, Avenue-road, Leamington Spa, the wife of William Shakespeare Robinson, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., late of Gloucester, of a son.

MARRIAGES.

FUHR—BOTTOMLEY.—On Jan. 1st, at St. James's, Norlands Holland-park, London, W., Robert Strickland Hannay Fuhr, L.R.C.P., L.R.C.S. Edin., Midhurst, Sussex, to Maud Lilian, youngest daughter of Henry H. Bottomley, of Clanbrassil, Cultra, co. Down, Under-Sheriff, co. Antrim, Ireland.

JONES—WOODMAN.—On Jan. 7th, at Christ Church, Forest Hill, by the Rev. C. A. Sturges-Jones, curate of St. Mary the Virgin, Reading, assisted by the Rev. Gustavus Jones, vicar of the parish, Wilfred Edward Jones, M.R.C.S., L.R.C.P., second son of C. Sturges-Jones, M.R.C.S., of Chichester, to Ellen Beake, third daughter of William Woodman, of Woodbank, Forest Hill.

DEATHS.

DIXON.—On Jan. 3rd, at Harrow Lands, Dorking, James Dixon, F.R.C.S., aged 82.

FINCH.—On Jan. 2nd, at Westville, St. Mary Church, Torquay, Thomas Finch, M.D. St. And., M.R.C.S.

HILTON.—On Jan. 6th, at Milestone House, Upper Deal, Thomas Denne Hilton, M.B. Cantab., aged 74.

LOMAS.—On Jan. 3rd, at Belper, Henry Lomas, L.S.A., in his 92nd year.

MAY.—On Jan. 2nd, at Bournemouth, W. Costall May, M.R.C.S., late of South Kensington, aged 68.

RUBINSTEIN.—On Jan. 2nd, D. Rubinstein, L.R.C.P. Lond.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 9th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Rainfall	Remarks at 8.30 A.M.
Jan. 3	30·21	S.W.	44	43	46	46	43	...	Overcast
" 4	30·26	S.E.	43	42	46	45	40	...	Overcast
" 5	30·53	N.E.	41	39	44	42	40	...	Cloudy
" 6	30·64	S.E.	39	37	41	41	38	...	Overcast
" 7	30·66	N.E.	36	35	43	43	35	...	Overcast
" 8	30·68	N.E.	43	42	49	47	34	...	Foggy
" 9	30·86	N.E.	36	33	54	40	39	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

AN UNQUALIFIED PRACTITIONER.

WE have received the following account of an obstetric operation undertaken by a layman, a subaltern in Her Majesty's Army, under circumstances which not only make his interference most proper, but testify to his great coolness and strong sense of practical humanity.

The other night S—— woke me to say that a Gurka woman was dying in childbirth, and as I was a married man would I go and see if I could do anything. I learnt from the hospital assistant (a native Baboo) that an arm of the child had appeared three days before. He had put it back, and also a knee which next appeared. The arm had appeared again, and the child had been dead nearly *two* days. The husband had no faith in the hospital assistant and as a last resource appealed to the Sahib in his hour of need. The hospital assistant wanted to open the uterus, but both the woman and her husband absolutely refused to permit the use of a knife. I suggested trying to bring away the body piecemeal; but, there being no appliances beyond a small pocket-case of instruments, the hospital assistant said this was impossible. After two hours of argument, during which the husband obstinately refused to permit an operation and suggested leaving the case as it was for another two days to see if nature would assist, I persuaded him to allow chloroform to be administered with a view to making an examination, knowing sufficient to understand that every hour of delay increased the risk of blood-poisoning. The hospital assistant had no nerve and suggested leaving the woman, as she was bound to die. It is true that 'fools rush in where angels fear to tread'; but, taking the case into my own hands, I ordered him to sever the arms of the dead child at the shoulder, as they were evidently the cause of obstruction. This was done with a *pocket lancet*, and the rest of the body came away without difficulty. There were no midwifery instruments and not even a vaginal syringe; but, having made certain that nothing remained, the hospital assistant washed out the womb and applied certain astringents to stop the bleeding. In order not to frighten the woman I had stayed outside till chloroform was administered, and as she now showed signs of coming to I left the room. This was two days ago. Her temperature remains normal, and she is in a fair way to recovery. A little knowledge may be a dangerous thing, mine being derived from veterinary science, a few books I had read, a few operations I had seen in hospitals, and one case of childbirth I had seen in Persia; but I am confident that I saved that woman's life. The whole affair took place in a wretched hovel not ten feet square, and you can imagine how unpleasant it was. It is true that there is no limit to the duties a soldier may be called on to perform, and in future I shall be surprised at nothing; but I certainly never expected to have to attend professionally a midwifery case. You might show this to Dr. J——. He will probably be amused at my attempt at amateur surgery. In these out-of-the-way districts the law does not bother about unprofessional men undertaking these things, even supposing the patient dies. I may have been rash; but it was one of those occasions when one must exercise one's own judgment. The hospital assistant had no nerve; the woman was bound to die unless something was done; and I did what I thought was right to the best of my ability, happily with satisfactory results.

Dubitans.—From the information supplied to us there would appear to be no reason why the parties should not marry. The family history on the man's side might be inquired into one generation further back, but the indications for extreme precaution are not very obvious.

M.D.—The snowballing was preferable, but we do not see the evidence of inspiration.

HOW TO MAKE A PORTABLE SPIRIT-LAMP.

To the Editors of THE LANCET.

SIRS,—A small spirit-lamp is an extremely useful pocket companion for the general practitioner in many ways. One can be easily extemporised from an empty thermometer case with screw-cap by simply fitting it with a few strands of lamp cotton and then filling with spirit. A piece of indiarubber tubing at the joint makes it perfectly spirit-tight. It is useful for the following puposes:—1. Sterilising the needles of hypodermic syringes. Death has been, in several instances, attributed to the use of dirty needles, and dry heat forms the best means of rendering them aseptic. 2. The preparation of sterilised hypodermic solutions by previously boiling the water used in a tea-spoon. It is well known that distilled water, unless freshly prepared, is not sterile. Microscopic examination will reveal the presence of penicillium &c. Some instrument-makers still send out cases fitted with a small bottle for distilled water. 3. As a companion to Pavy's Urinary Test-case. Amongst the numerous designs of so-called portable test-cases this is the only one that can be carried about by the practitioner as habitually as his stethoscope and thermometer. 4. For sealing tubes containing vaccine lymph. 5. For sterilising lancets or needles used in vaccination. I find that mine holds 50 minims of spirit and gives a clear, smokeless flame for the space of ten minutes.

I am, Sirs, yours faithfully,

Liverpool, Jan. 6th, 1896. WM. G. SUTHERLAND.

A HERBALIST AND DEATH CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—Would you kindly give me your opinion on the following? In this town we have a herbalist who is also on the chemists' register by reason of his having had a shop prior to the Act. This man visits (and has done so, I am told, for about thirty years), dispenses, &c., and, in short, is looked upon by many of the inhabitants as a legally qualified medical man, or. as they term it, "a right doctor." He advertises himself as Dr. So-and-so. A few years ago we had him prosecuted by the Medical Defence Union. The fines, I understand, were paid by some herbalist society. This, I am sorry to say, has not deterred him from going on as before. His certificates of death are accepted by our local registrar, who, I presume, returns them as uncertified deaths. As long, however, as they are accepted the herbalist works away in peace and quietness. What are we to do? It seems to me that prosecuting him again would have as much effect as before.

I am, Sirs, faithfully yours,

Jan. 3rd, 1896. JUSTICE.

*** The pertinacity and success of the herbalist are not surprising, seeing the encouragement with which herbalists meet. The person upon whom pressure should be brought to bear is the local registrar. If clear proof can be obtained that the herbalist's death certificates have been accepted by that official as sound, communication should be immediately made to Somerset House.—ED. L.

MEDICAL ADVERTISEMENTS IN SOUTH AFRICA.

As a pendant to the extraordinary advertisements from an Australian paper which we reprinted in our issue of Dec. 14th, 1895, a correspondent sends us a still more remarkable production from a South African journal. The advertisement, which occupies a column, is too long to print in full, and much too good to be condensed; nevertheless we extract for our readers a few "tit-bits" from it. We can only repeat the remark we made before—*Cœlum non animum mutant qui trans mare currunt.*

Personal.—The President and Mrs. Kruger, during their recent indisposition, were attended by Dr. Speer of this town [Johannesburg].

* * * *

AMERICAN DISPENSARY.

Corner Kerk and Joubert-street [Johannesburg],

DR. SPEER

IS a graduate of the Medical Department of Harvard University, Class 1874, United States of America, and is registered as such in both the Eastern and Western Hemispheres; also licensed in the Transvaal. The Doctor has devoted twenty-one years to the study of NERVOUS AND CHRONIC DISEASES, in association with the leading specialists of the old and new worlds, which enables him to treat all private troubles with excellent results. Catarrh, stomach, and liver troubles attended to in all their various forms. All skin diseases, from whatever cause, absolutely cured within a stated time. All applying to him will receive his honest opinion of their complaints. No experimenting! No mercury used. He will guarantee a positive cure in every case he undertakes, or forfeit £200. His reason for doing so is this: Where there is no organic disease and nothing but an inorganic trouble, or in other words a conglomeration of symptoms producing a certain result, there is no reason why it cannot be removed with the proper remedies. Therefore he guarantees. Furthermore, in all other businesses the master must guarantee his work—why not in medicine? The old-fashioned doctor will promise nothing, therefore he must be guessing as to the trouble, and guessing, too, at the remedy. Ladies and gentlemen: in science there is no guess-work. No man or woman can die without a cause. That cause should be known to the doctor, and the remedy too! Remember, medical ethics will not cure, neither will dignity founded on guessing help you.

* * * *

I wish to make the following statement, which may be of interest to some of the suffering in Africa:—I have been troubled for the past seven years with a skin disease, nervousness, &c., and have in that time been under the treatment of several family doctors, all of whom did me no good. I finally called upon Dr. H. J. Speer, and under his treatment I have been entirely cured in six weeks.

H. J. JACOBS,
Dated July 8th, 1895. Fordsburg, Z.A.R.

* * * *

Peter Jacob Viljoen wants to add his testimonial to the many hundreds already in possession of Dr. Speer since he arrived in the Transvaal.

Three months ago I called on Dr. H. J. Speer, suffering from catarrh, general debility, weak back, and in fact almost unable to attend to my duties, which are engine-driver to the Netherlands Railroad. I was constantly suffering pain, but since I have been under Dr. Speer's treatment I have found a constant and steady improvement with every bottle of medicine he gave me, and I am happy to say that to-day I am a changed man; his medicines acted like a charm from the first, and I thank God I called on him, for he has given me a new lease of life. This I will bear testimony to.

PIETER JACOBUS VILJOEN,
Dated July 11th, 1895. Netherlands Railway, Springs, Z.A.R.

* * * *

The core of my life has been eaten entirely out of me, and the contents of my pockets have been systematically robbed. I make this statement voluntarily, and I want the public distinctly to understand that this bombast and outrage ought to be stopped, and I hereby testify that Dr. H. J. Speer has, in two months, made me a new man. I had been suffering for the past 16 years of nervous debility, indigestion, and liver trouble, and had been under the treatment of at least a dozen doctors before I went to him. I look upon this as an act of justice, and if there were more people who have suffered as I have, who would come forward and make a statement of facts, there would be less suffering in the world and more smiling faces. Yours very respectfully,

WM. THORNBER.

A. B.—The proceeding is legal. The patient must be, of course, examined at separate times by each medical man. It is preferable that the signatures should not be from father and son, or partners.

BARBADOS AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—The West Indies are sometimes made use of for those requiring winter rest, change, and sunshine, but not so frequently as they might well be. The voyage to Barbados is a pleasant one of eleven days and a half by the boats of the Royal Mail Steam Packet Co. The Azores are soon passed; then genial warmth begins, the Tropics are entered, and life on board becomes an ideal existence. The packets run at intervals of a fortnight and make direct for Bridgetown, Barbados. West Indian life there bursts at once on the traveller, with the fleet of small boats that meet the ship, manned by the dark-skinned inhabitants of the island, the craft being as miscellaneous in character as the vehicles on the road to the Derby. The island is made use of as a sanatorium by the inhabitants of many of the other West Indian islands; the north-east trade wind blowing here with such excellent effect that disease is uncommon and sunstroke almost unknown, the bracing and invigorating air being always in motion. In addition to the large and commodious hotels in Bridgetown and its neighbourhood a well-managed establishment known as "The Crane" has been built on the cliffs some twelve miles from the town. The drive thither past the gay gardens of Bridgetown and the green sugar-cane fields in the country gives a good introduction to the island. The roads and cane-fields teem with the black labourers, a large proportion of them being female. They work in the blazing sun with splendid energy in their short white clothes, which, covering a fine physique, give a pleasing idea of the population. Close by the hotel are bathing-huts, and most delightful sea bathing is to be had, in which, even by the infirm, no feeling of shock is experienced, and the bath may be prolonged almost *ad libitum*. When I was there last year a trained nurse was kept at the "Crane" to attend any invalids who might come to stay there. A few miles along the coast is the little town of Bathsheba, where good hotels and good bathing can also be found, and I would heartily commend Barbados to those of our profession who are accustomed at this time of the year to send patients for long sea voyages or to foreign lands in search of health. Here the people, the island, and the language are all our own. In-door life is carried on practically in the open air. Doors and windows are kept wide open, but carefully jalousied when necessary to keep out the sun. Where convalescence after such diseases as influenza, or breakdown from nerve exhaustion, or early symptoms of phthisis may be the cause of travel it would be difficult to find a more invigorating and health-giving short sea voyage, or a more pleasant destination than the one here indicated. The best months, and the healthiest, are from November to March, inclusive; the temperature then is not disagreeably hot, averaging about 82° to 85° F. in the shade. Such clothes as one wears in the hottest days of an English summer will then well suit the climate in Barbados.

From this island one should certainly not return without paying a visit to some of the other islands, where, though the same health advantages are not perhaps to be found, the beauties of Nature are more abundant and more lavishly displayed. The magnificent island of Trinidad, and the poor, but most beautiful, island of Dominica, both of them some three days' sail from Barbados, should be, if possible, included in the journey. In both these places, and notably in Trinidad, where a very fine hotel has just been opened, good accommodation is to be found, and the West Indian hospitality is as bountiful now as in the days when Charles Kingsley wrote his "At Last."

I am, Sirs, yours faithfully,

17, Finsbury-circus, E.C. S. H. APPLEFORD.

THE GASTRONOMIC ART.

COOKERY and all that pertains thereto has not been studied in England with the attention it deserves, and we welcome the *Chef*, a new journal for cooks, caterers, and hotel-keepers. Judging from the number before us, the new journal is conducted on right lines and promises to prove a stimulus to good cooking in this country. It is not, however, the high-class cooking dealt with by this journal which stands in so much need of reform as what may be described as plain cooking. Amongst the poorer classes the waste of food from faulty methods of cooking and preparing food for the table is lamentable. The journal is published at 13, New Bridge-street, E.C.

Oceanis.—Our correspondent should consult a solicitor, and be careful to explain all details to him. Without, however, giving a legal opinion, we think—1 and 2. Yes.—3. The party with whom the contract was made.—4. Our correspondent has no contract with the shipping company.—5. Let the solicitor advise.

IS NIGHT-WORK A NECESSITY?

To the Editors of THE LANCET.

SIRS,—It is, I believe, generally recognised in the profession that night-calls constitute the chief burden of a general practitioner's life. How many medical men have lost their lives through leaving a warm bed, being compelled to pay visits during the most inclement weather, and their night's rest being, moreover, frequently broken? This often leads to a low, nervous state, with its accompanying insomnia and irritability. Could not one medical man in each district be appointed by his colleagues to engage solely in night-work, he being remunerated either by the patient attended or by the members of the local association? If medical men would work together in this matter a solution of the night-work problem would, I believe, be easily found. Hoping that the above suggestion will be taken up and worked out practically,

I remain, Sirs, yours faithfully,

Westbury, Wilts, Jan. 6th, 1896. ALBERT E. COUZENS.

*** Such a perfection of coöperation and mutual trust amongst medical men as the practice suggested would mean is impossible to conceive. But even if the body of local practitioners could make up their minds to transfer each night all the different trusts placed in them by their clients to one man, and even if the one man could be found worthy to accept such trusts, the arrangement would be a very unfair as well as unpalatable one to the patients. Regular attendance is the most absolute requisite in the treatment of an anxious case; and it would be impossible to give such a case adequate care if the man in charge depended upon the report of another, however able and exhaustive, for the history of all that had happened during the night.—ED. L.

A COUNTRY DOCTOR'S RIDE, JANUARY, 1786.

THE late Dr. Edward Jenner of Gloucestershire gives the following account of a ride through a snowstorm which he had to undertake in the above-named year:—

January 3rd, 1786.—I was under the necessity of going from hence [Berkeley] to Kingscote. The air felt more intensely cold than I ever remember to have experienced it. The ground was deeply covered with snow, and it blew quite a hurricane, accompanied with continual snow. Being well clothed, I did not find the cold make much impression upon me till I ascended the hills, and then I began to feel myself benumbed. There was no possibility of keeping the snow from driving under my hat, so that half my face and my neck was for a long time wrapped in ice. There was no retreating, and I had still two miles to go—the greatest part of the way over the highest downs in the country. As the sense of external cold increased the heat about the stomach seemed to increase. I had the same sensation as if I had drunk a considerable quantity of wine or brandy, and my spirits rose in proportion to this sensation. I felt, as if it were, like one intoxicated, and could not forbear singing, &c. My hands at last grew extremely painful, and this distressed my spirits in some degree. When I came to the house I was unable to dismount without assistance. I was almost senseless; but I had just recollection and power enough left to prevent the servants bringing me to a fire. I was carried to the stable first, and from thence was gradually introduced to a warmer atmosphere. I could bear no greater heat than that of the stable for some time. Rubbing my hands in snow took off the pain very quickly. The parts which had been most benumbed felt for some time afterwards as if they had been slightly burnt. My horse lost part of the cuticle and hair at the upper part of the neck, and also from his ears. I had not the least inclination to take wine or any kind of refreshment. One man perished a few miles from Kingscote at the same time and from the same cause.

The correspondent who sent us the above extract from a letter of Edward Jenner being a medical man, must feel, as we do, grateful that January, 1896, has not opened with the rigour of January, 1786. We print it because it paints a remarkably true and vivid picture of the alteration of sensation under the influence of extreme cold.

Dr. J. Johnston of Bolton has sent us another of his tantalising accounts of a bicycle tour. His previous one was in Wales. The present expedition was more extended, covering ground in Cheshire, Staffordshire, Warwickshire, Worcestershire, and Shropshire, and embracing an ideal selection of English scenery. Lichfield, Coventry, Kenilworth, and Shrewsbury are unique in their several ways.

M.O.H.—Our correspondent is referred to an article in the present issue dealing precisely with the information he seeks.

THE UTILITY OF FIRST AID.

To the Editors of THE LANCET.

SIRS,—I would not quite say the "futility" of first aid, because I believe we ought to know how to render "first aid" effectively as citizens only of a community. Nevertheless, apart from very definite limitations, I am disposed to think that without very accurate medical diagnosis such aid may often be more harmful than otherwise. Much of what is taught as first aid in surgical cases should really be described and taught as the *handling of the injured*, and this might well be a matter of more concern to ourselves who are medical men, and, further, could well be encouraged as a branch of general education.

Shall a railway guard be taught how to relieve an injured bladder by catheter, or to diagnose the exact import of the pupils so that he may distinguish cerebral hæmorrhage from syncope and abstain from administering stimulants or proceed to administer them? There are about a dozen variations of the pupil, each giving very precise indications of brain conditions; these must be mastered before we can be sure of administering *real* first aid to the injured. Shall a railway official's evidence as a *medical* witness be accepted in the case where damages are claimed from a railway company? These considerations are important. Indeed, such are financial considerations of a railway company itself. Why not compel railway companies to have surgical and medical materials ready in case of emergency, and for certain journeys a qualified medical man?

I met the other night, at a patient's house, a first aid enthusiast, an "expert bandager," who is never without a bandage in readiness. He discussed insensibility and poisons. I asked him how he would treat a case of opium or morphia poisoning. He consulted a small book compiled as a first aid guide by two medical men, and published under the auspices of a wholesale firm of chemists and druggists, for the year 1895. Permanganate of potash and oxygen inhalations were not mentioned; contra-poisons, &c., are recommended. Here is a "Visiting Diary" brought out by another firm for the year 1896. In the column of antidotes I find no mention of oxygen and oxidisers; on the contrary, forced exertions and poisonous alkaloids are to be used as means of recovery. Shall those who administer first aid to the injured, beyond exercising the common offices of intelligent human help, be in the position of medical men in sustaining an action at law for wilful malpractice, such as forced exertion applied in a case of syncope?—I am, Sirs, yours faithfully,

Jan. 3rd, 1896. A MEDICAL MAN.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic 10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Dr. Dudley W. Buxton: An Appended Note on Anæsthesia. Casual Communication:—Mr. J. F. Colyer: Some Cases of Open Bite.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. George H. Savage: The Prevention and Treatment of the Insanity of Pregnancy and the Puerperium.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover square, W.).—Dr. R. A. Gibbons: Renal Colic in Infants.—Dr. Ernst Michels: On Prevesical Abscess.

WEDNESDAY.—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Presidential Address by Mr. A. D. Michael.

NORTH-WEST LONDON CLINICAL SOCIETY.—8.30 P.M. Clinical Meeting.

THURSDAY.—HARVEIAN SOCIETY.—8 P.M. President's Address and Annual Conversazione.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Dr. Sydney Short (Birmingham): Observations on a Series of 550 Timed Nitrous Oxide Cases.

FRIDAY.—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (11, Chandos-st., W.).—3.30 P.M. Cases, Microscopical Specimens, &c., by the President, Mr. Mayo Collier, Dr. Pegler, and Dr. Milligan. Mr. Mayo Collier will open a Discussion on the Causes and Consequences of Chronic Nasal Obstruction. Mr. Lennox Browne: A Suggestion to Abolish Gargling in the Treatment of Acute Inflammations of the Throat.

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square).—8 P.M. Surgeon-General C. A. Gordon: Experiences in Relation to Cholera in India from 1842-'79.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

During the week marked copies of the following newspapers have been received:—*Dundee Advertiser, Reading Mercury, Bristol Mercury, City Press, Crewe Chronicle, West Middlesex Standard, Birmingham Daily Gazette, Hertfordshire Mercury, Leeds Mercury, Weekly Free Press and Aberdeen Herald, Liverpool Daily Post, Halstead Times, Cork Examiner, West Sussex Gazette, Bristol Times and Mirror, Northern Whig, Roscommon Herald, Hull Times, Border Counties Gazette, Drogheda Conservative, The People, Eastern Morning News, Times of India, Pioneer Mail, Scotsman, Public Health, Yorkshire Post. Builder, Brighton Gazette, Architect, Herne Bay Argus, Jackson's Oxford Journal, Liverpool Courier, Bedford Advertiser, East Anglian Daily Times, Hampstead Express, Manchester Courier, Sussex Daily News, Brighton Herald, Local Government Journal, Mining Journal, South African Telegraph, Midland Sporting Gazette, Littlehampton News, Surrey Advertiser, General Advertiser (Dublin), Local Government Chronicle, Orkney Herald, Isle of Ely Advertiser, Sydney Mail, Indian Daily News, Shrewsbury Chronicle, Daily Chronicle, Inland Sentinel (Kamloops, B. C.), Le Courrier de la Presse, Rangoon Gazette, Rossendale Free Press, Tiverton Gazette, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. W. Adye, Bradford-on-Avon; Mons. F. Alcan, Paris; Mr. F. Argles, Wanstead; *Alloa Advertiser*, Proprietors of; A Sufferer; Atlantic, Lond.

B.—Dr. R. Boxall, Lond.; Mr. T. Bryant, Lond.; Mr. L. A. Bidwell, Lond.; Mr. G. R. Butler, Lond.; Mr. Bechterew, St. Petersburg; Mons. O. Berthier, Paris; Mons. le De Broca, Paris; Mr. G. G. Borrett, Chatham; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Beal and Son, Brighton; Messrs. Black and Co., Lond.; British Orthopædic Society, Lond., Sec. of; *Bath Argus*, Editor of; *British and Colonial Printer & Stationer*, Proprietor of; Bury Dispensary Hosp., Sec. of; Bradford Infirmary, Sec. of.

C.—Dr. J. A. Coutts, Lond.; Dr. J. Cadell; Dr. H. R. Crocker, Lond.; Mr. A. E. Couzens, Westbury; Mr. J. J. Coleman, Hitchin; Mr. W. Cowan, Glasgow; Mr. R. Cuffe, Woodhall Spa; Mr. E. T. Collins, Lond.; Messrs. J. & A. Churchill, Lond.; Messrs. Chalmers, Guthrie, and Co., Lond.; *Carnarvon Herald*, Proprietors of; *Citizen* Offices, Glasgow, Proprietor of; Civil Rights Defence Committee, Lond., Sec. of; Cortland Wagon Co., Lond.; *Christian News*, Glasgow, Proprietors of; Canthus, Lond.

D.—Dr. C. H. Dyer, Blackpool; Mr. W. Downes, Kidsgrove; Mr. T. F. Devane, Cork; Mr. A. Denman, Beaconsfield; Mr. H. N. Davies, Porth; Mr. M. V. Dee, Lond.; Messrs. W. Dawson and Sons, Lond.; Messrs. A. Durant and Co., Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh; Messrs. J. Davey and Co., Lond.; *Daily Western Times*, Exeter, Proprietor of.

E.—Mr. W. F. Elliot, Toronto, Canada; Messrs. Evans, Sons, and Co., Liverpool; E. P. & D. I. Hosp., Tottenham, Director of; *East London Observer*, Editor of.

F.—Sir Joseph Fayrer, Falmouth; Dr. T. Fisher, Clifton; Dr. G. Fitzgerald, Lond.; Mr. T. McC. Foley, Scarborough; Mr. E. Fawcett, Bristol.

G.—Dr. E Garceau, Boston, Mass.; General Medical Council, Lond., Registrar of; *General Advertiser*, Dublin; *Goole Times*, Manager of.

H.—Dr. W. S. Heifley, Brighton; Dr. J. Holmes, Overdale; Mr. F. Hobday, Lond.; Mr. C. J. Huish, Lond.; Mr. J. H. Haywood, Nottingham; Mr. T. Hall, Liverpool; Mr. J. Heywood, Lond.; Mr. J. Heywood, Manchester; Hamilton Association, Lond., Manager of; *Herne Bay Argus*, Editor of.

I.—Mrs. J. Illingworth, Lond.; Messrs. Ingram and Royle, Lond.; International News Co., Lond.

J.—Dr. J Johnston, Bolton; Dr. J. W. H. Jellett, Exeter; Dr. W. K. Jaques, Chicago; J. M., Nottingham.

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